

The supplementary data 3 (for the doctoral thesis of Toyoshima, Y.)

Time courses in experiment and simulation of Fig. 14.

Total 111 pages.

The experimental data sets of an upstream and a downstream molecule.

Left upper two panels; experimental data.

Right upper two panels; simulation data.

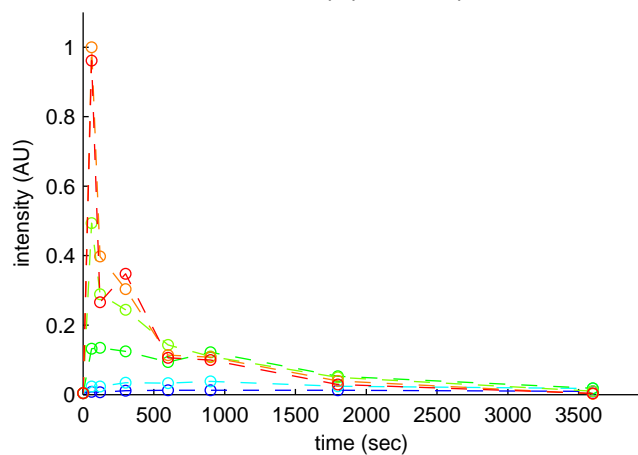
The sets of the time courses satisfied both the conditions i) and ii) were indicated by solid lines, otherwise indicated by dashed lines.

The sets of the experimental time courses satisfied both the conditions i) and ii) were indicated by closed circles, otherwise indicated by open circles.

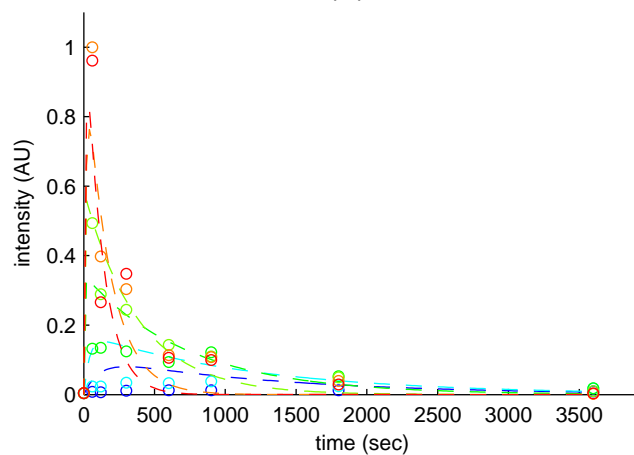
The doses of the stimuli were shown as colours. The hotter colour means the larger dose.

Lower four panels; the duration of upstream signal ($t_{1/2}$), peak intensity of an upstream molecule, and peak intensity of an downstream molecule in experiment (horizontal axis) and in simulation (vertical axis), and signal transfer efficiency obtained from experiment (horizontal axis) and from estimation (E''' in Fig. 13, vertical axis).

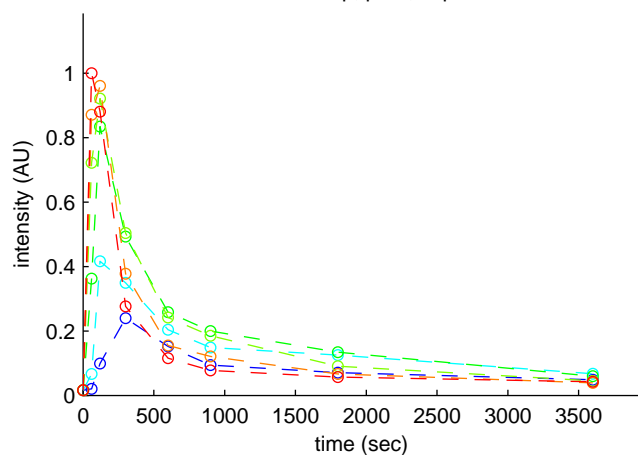
PC12_EGF_step, pEGFR, experiment.



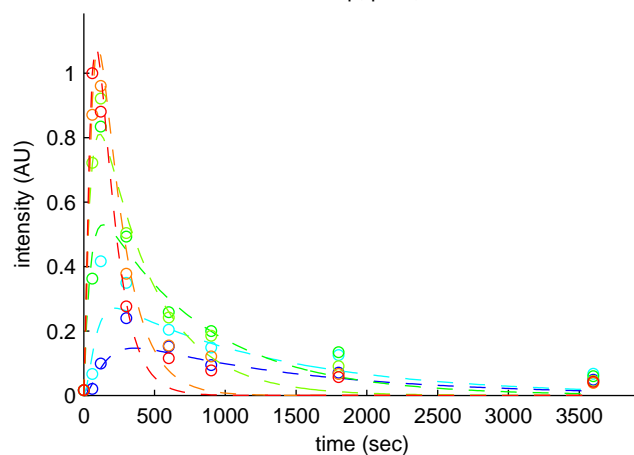
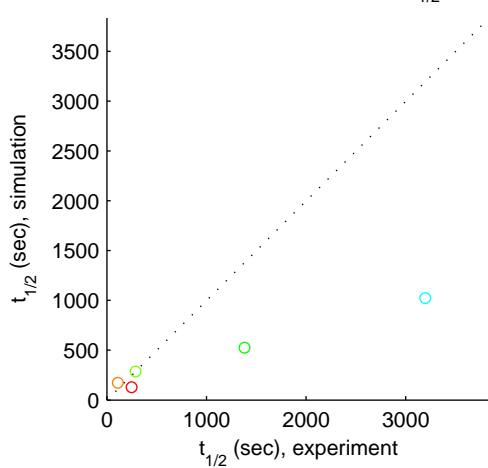
PC12_EGF_step, pEGFR, simulation.



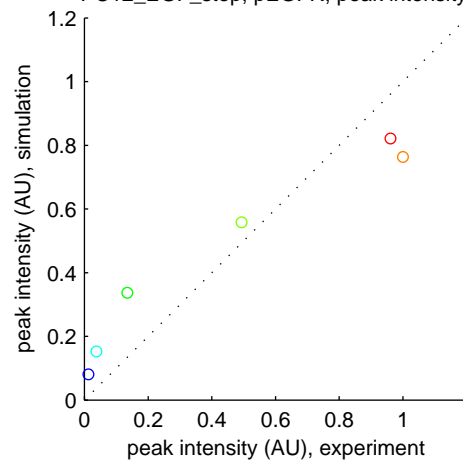
PC12_EGF_step, pAkt, experiment.



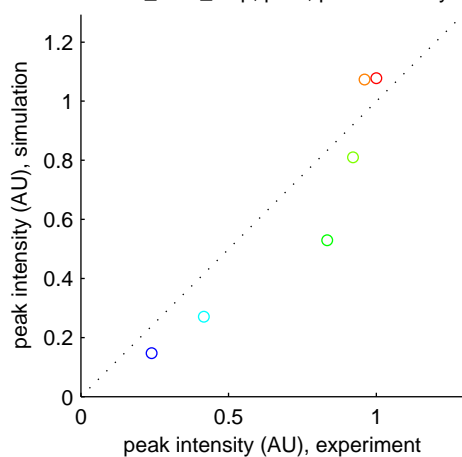
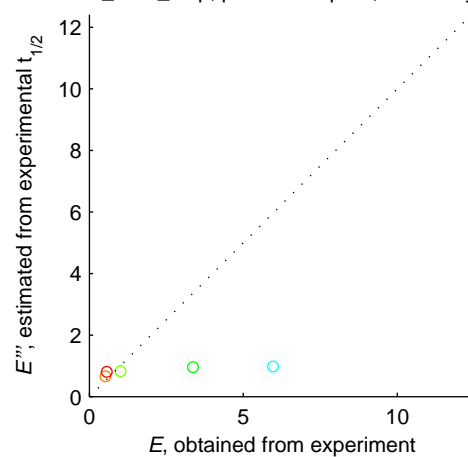
PC12_EGF_step, pAkt, simulation.

PC12_EGF_step, pEGFR, $t_{1/2}$ 

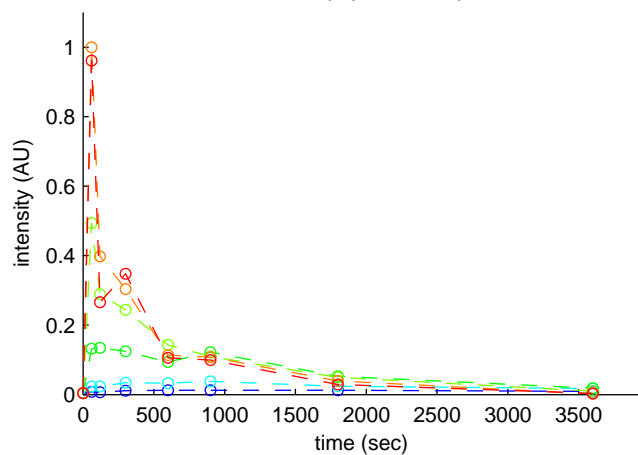
PC12_EGF_step, pEGFR, peak intensity.



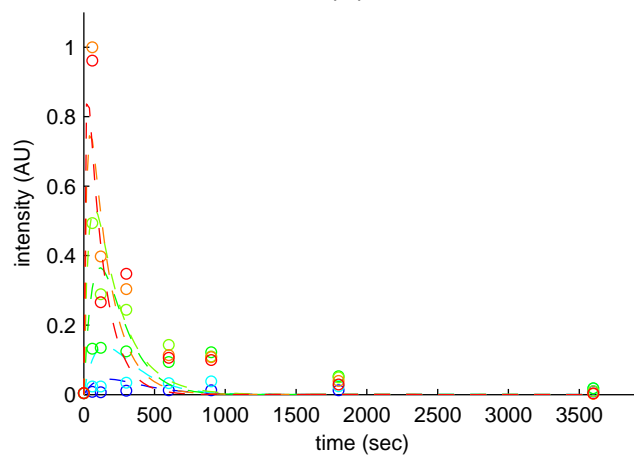
PC12_EGF_step, pAkt, peak intensity.

PC12_EGF_step, pEGFR \rightarrow pAkt, Efficiency (E).

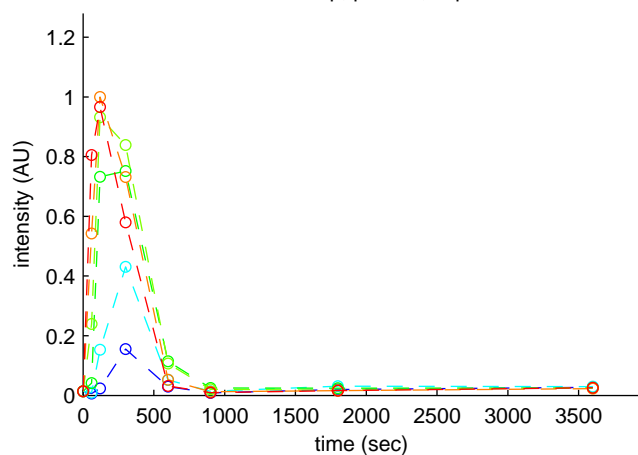
PC12_EGF_step, pEGFR, experiment.



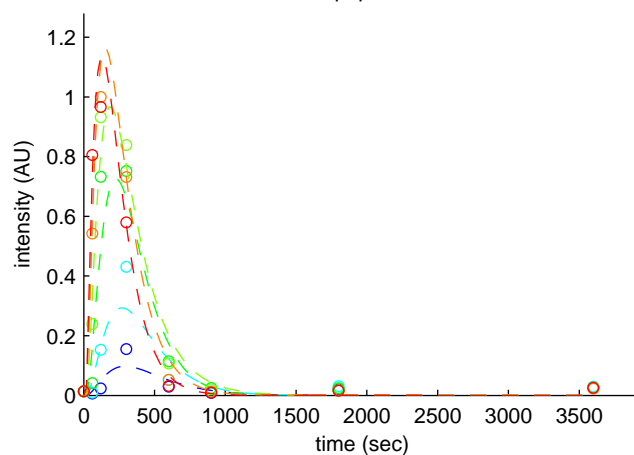
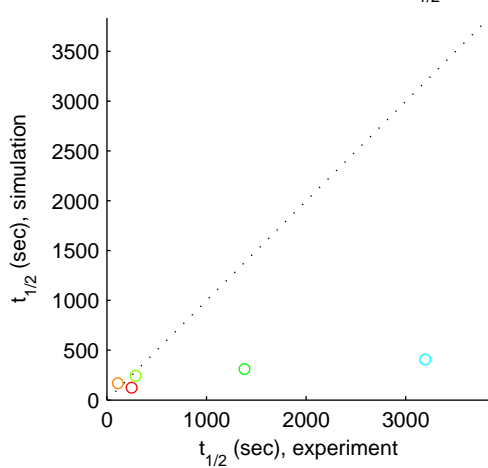
PC12_EGF_step, pEGFR, simulation.



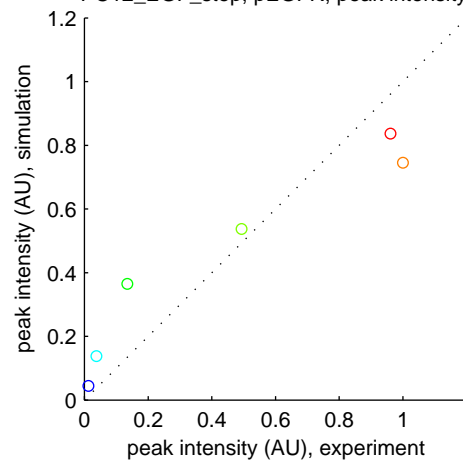
PC12_EGF_step, pERK1, experiment.



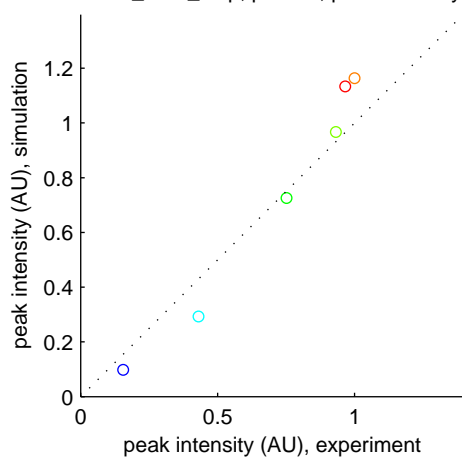
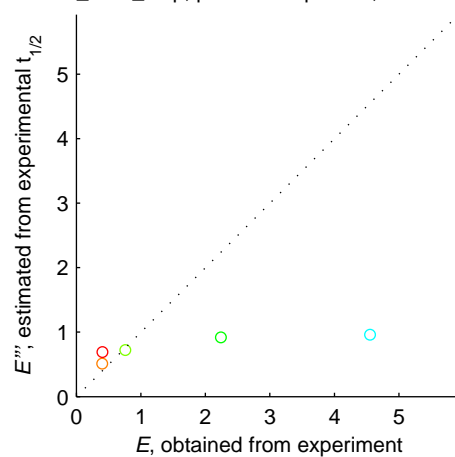
PC12_EGF_step, pERK1, simulation.

PC12_EGF_step, pEGFR, $t_{1/2}$ 

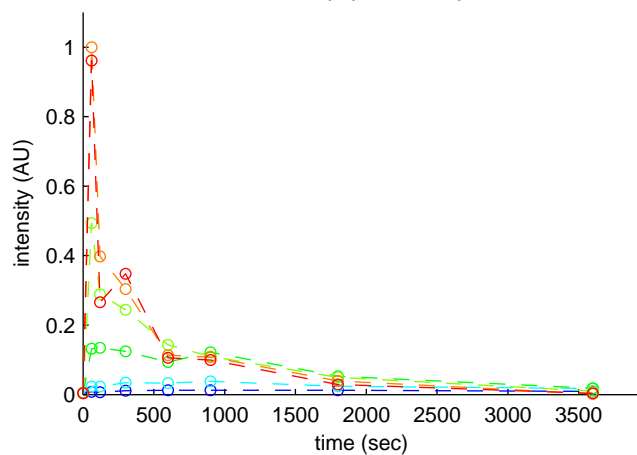
PC12_EGF_step, pEGFR, peak intensity.



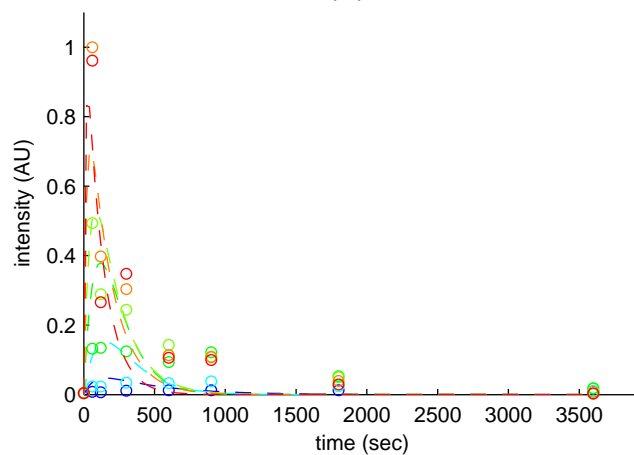
PC12_EGF_step, pERK1, peak intensity.

PC12_EGF_step, pEGFR \rightarrow pERK1, Efficiency (E).

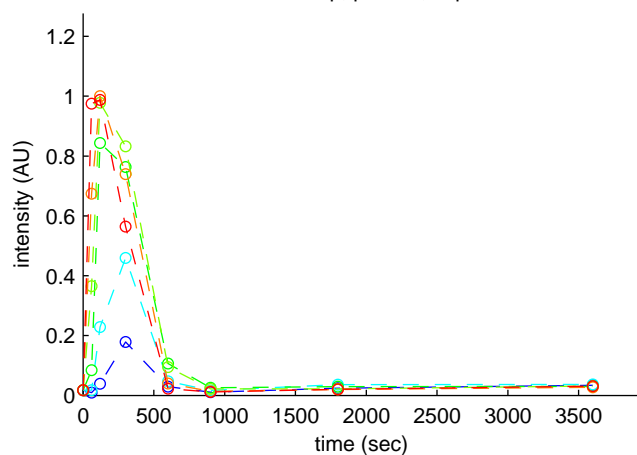
PC12_EGF_step, pEGFR, experiment.



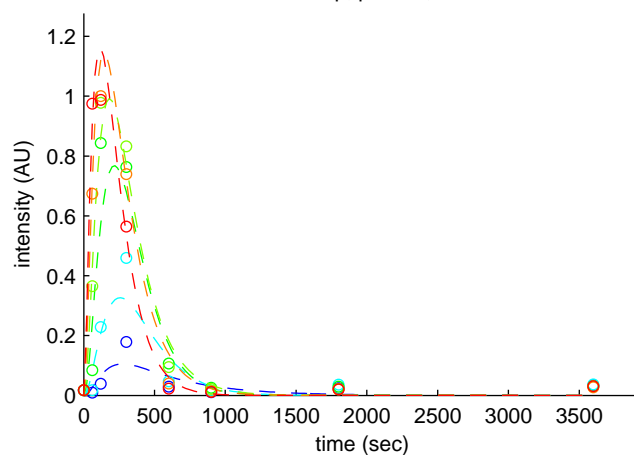
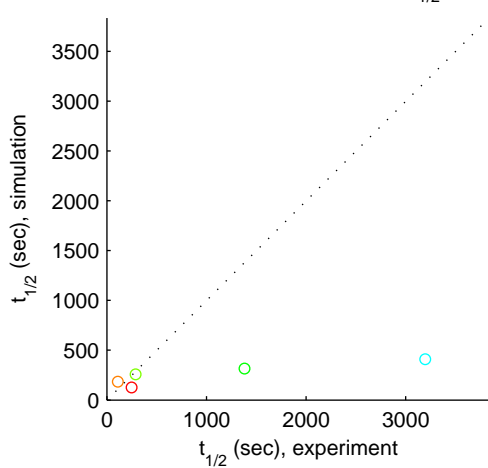
PC12_EGF_step, pEGFR, simulation.



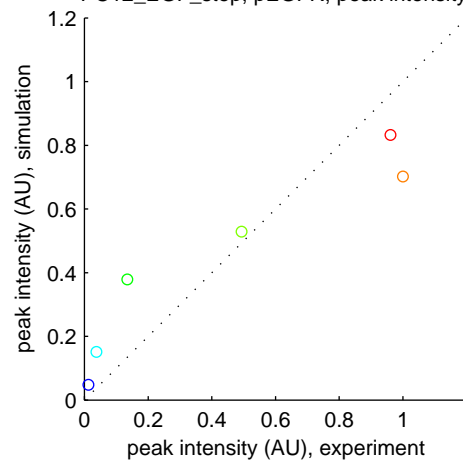
PC12_EGF_step, pERK2, experiment.



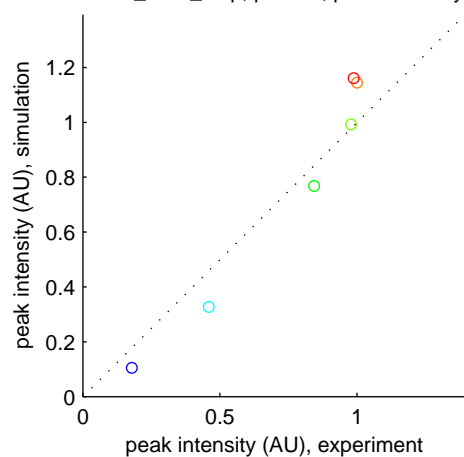
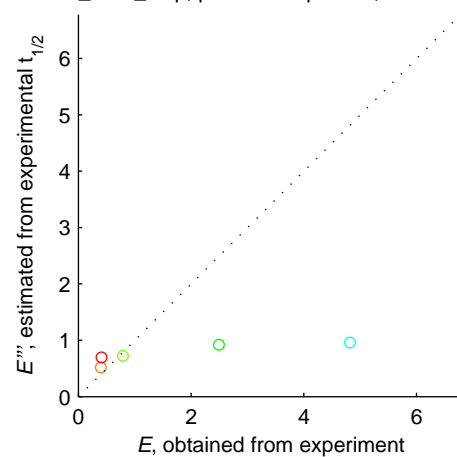
PC12_EGF_step, pERK2, simulation.

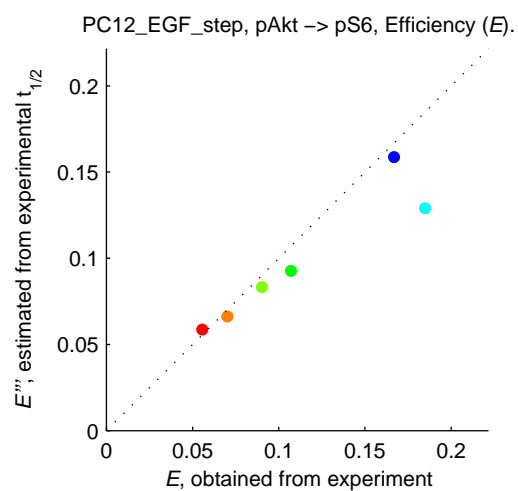
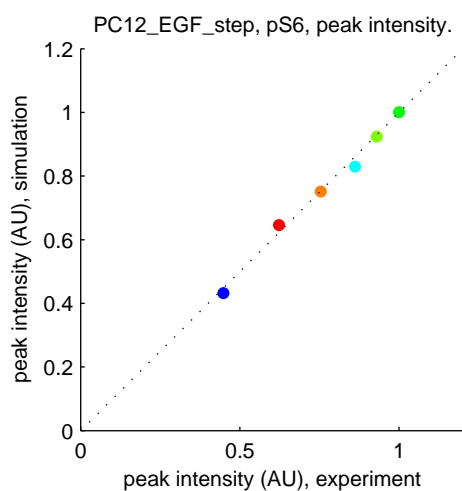
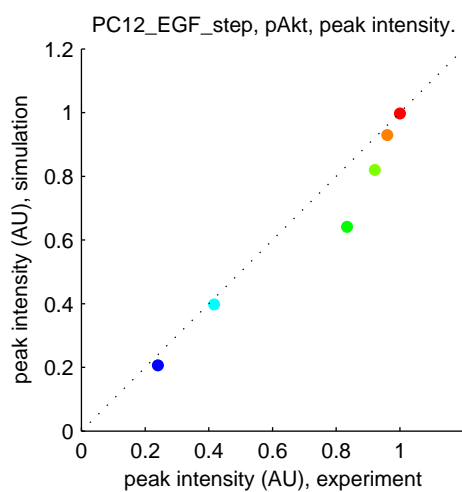
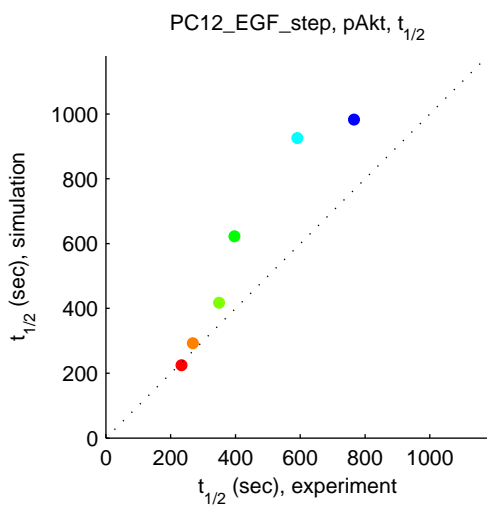
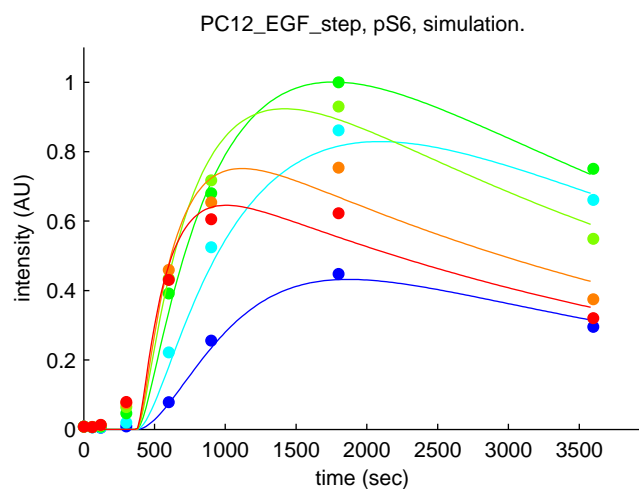
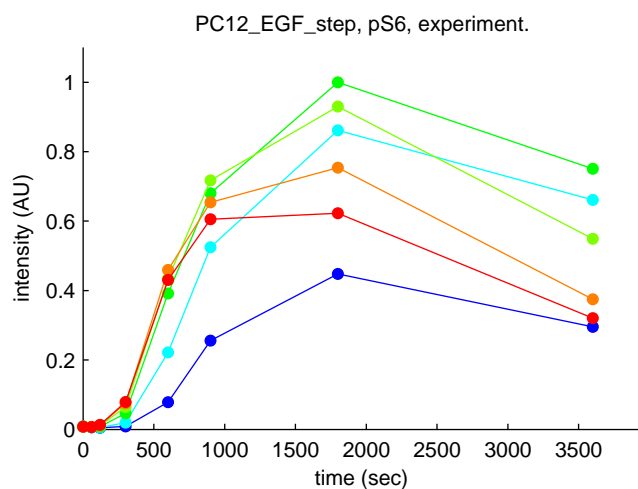
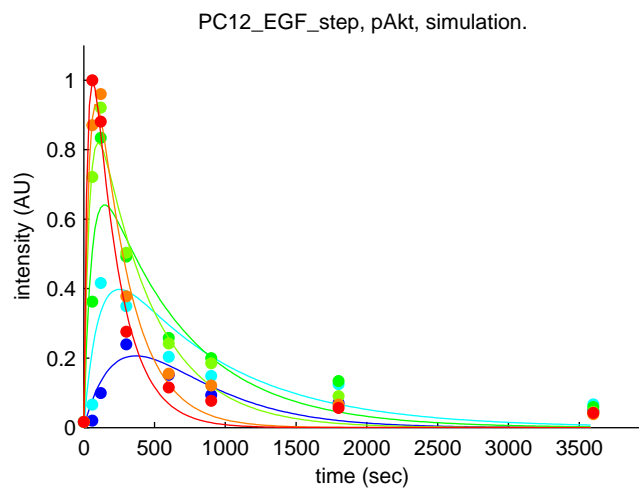
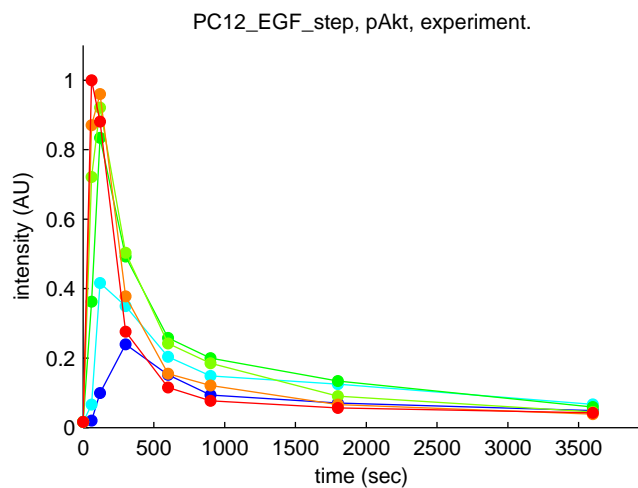
PC12_EGF_step, pEGFR, $t_{1/2}$ 

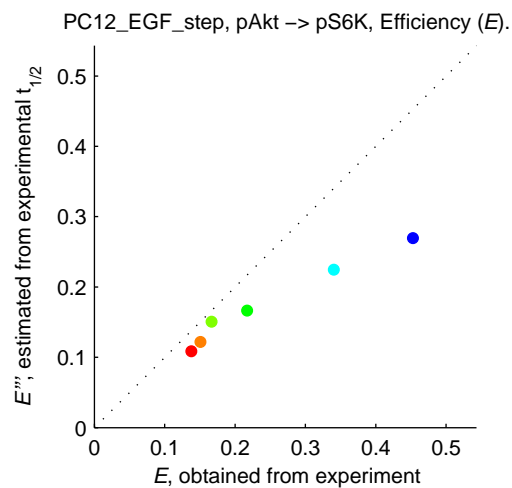
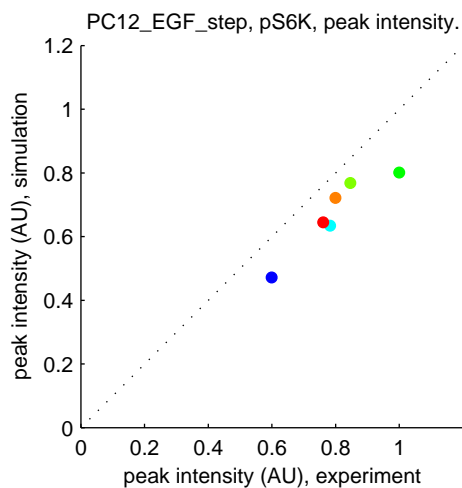
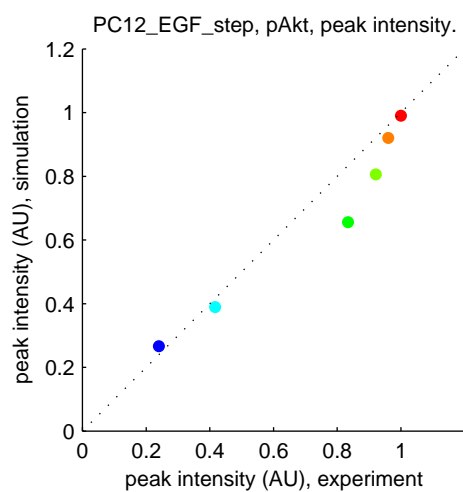
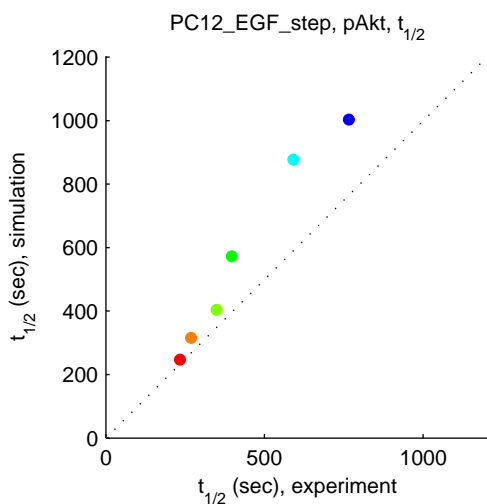
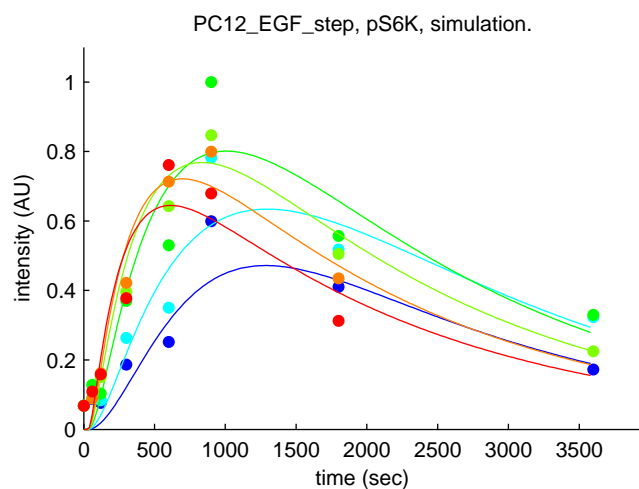
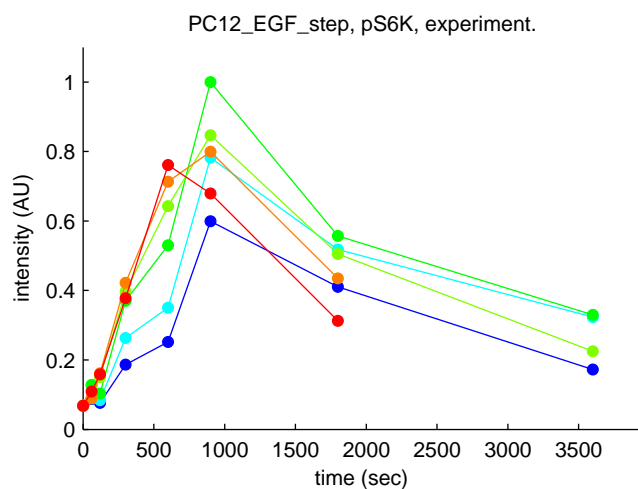
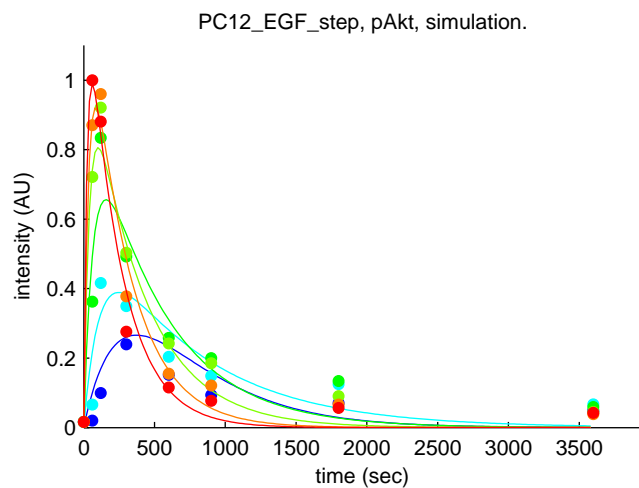
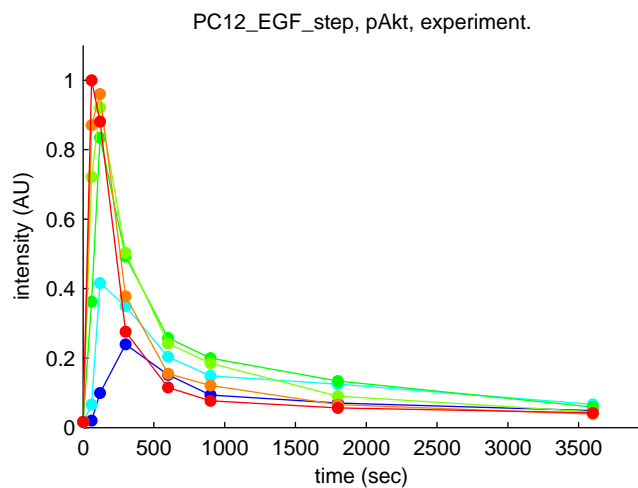
PC12_EGF_step, pEGFR, peak intensity.



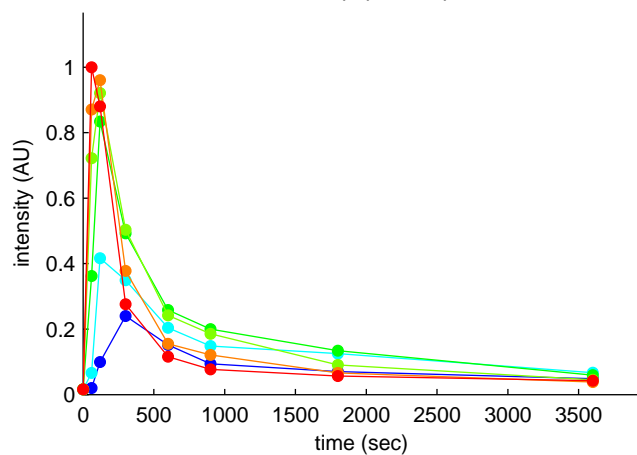
PC12_EGF_step, pERK2, peak intensity.

PC12_EGF_step, pEGFR \rightarrow pERK2, Efficiency (E).

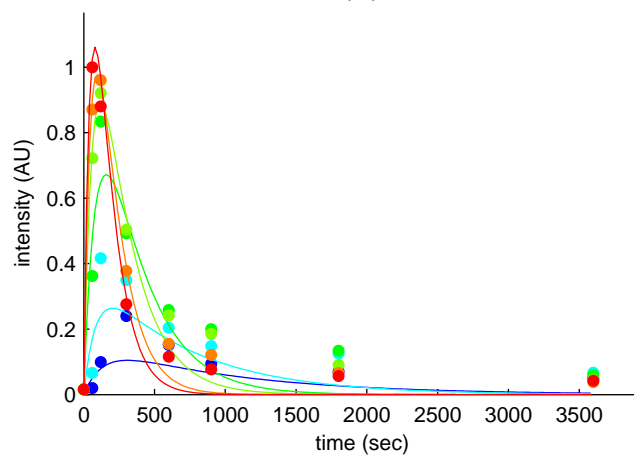




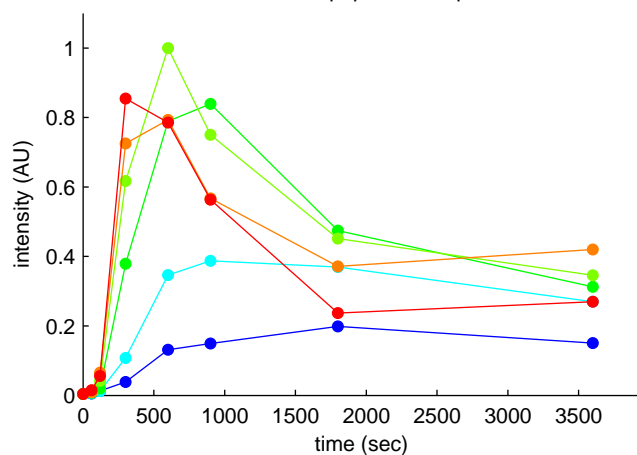
PC12_EGF_step, pAkt, experiment.



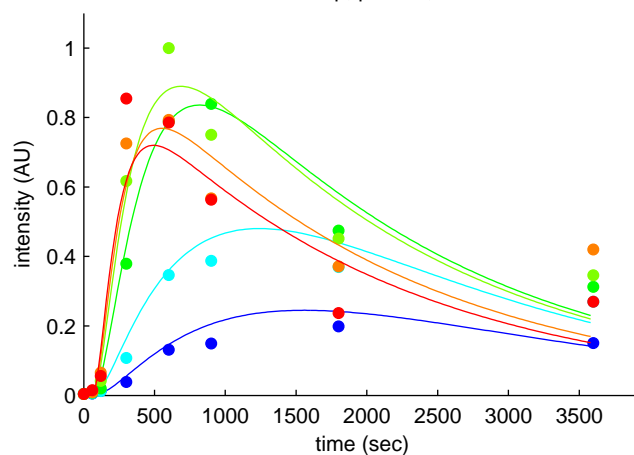
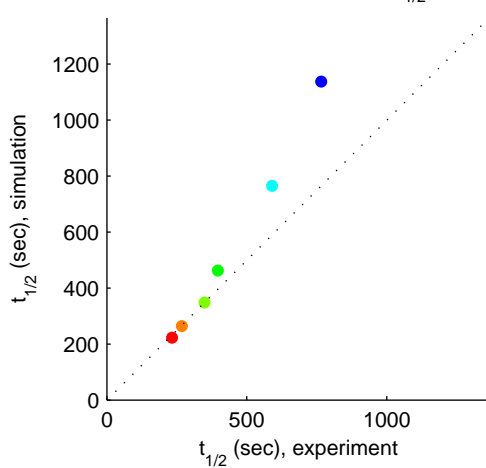
PC12_EGF_step, pAkt, simulation.



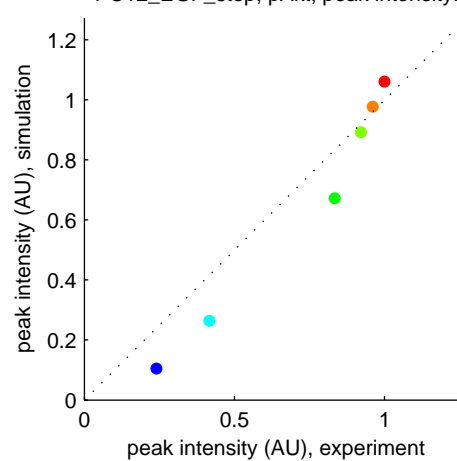
PC12_EGF_step, pElF4B, experiment.



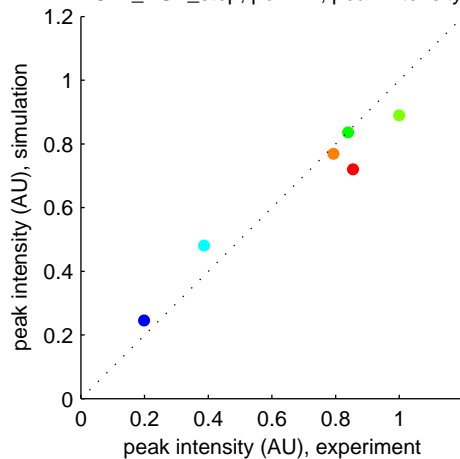
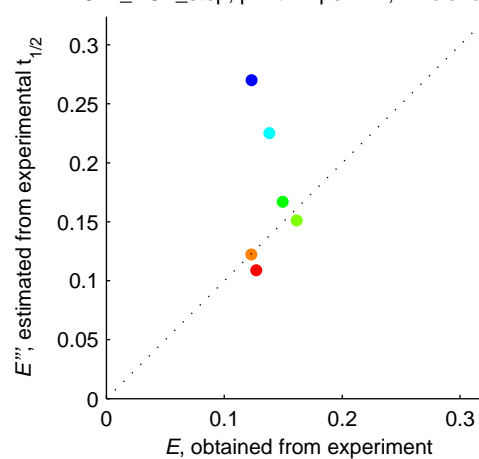
PC12_EGF_step, pElF4B, simulation.

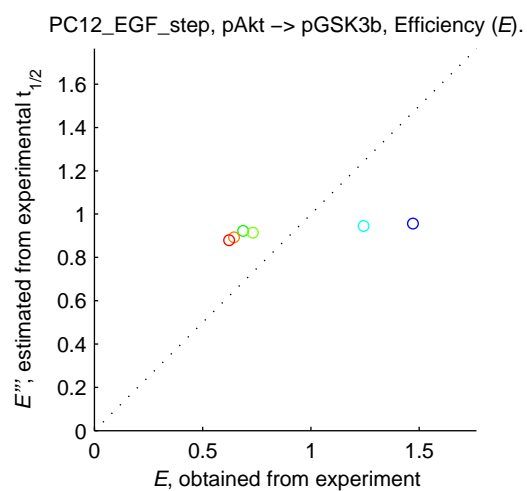
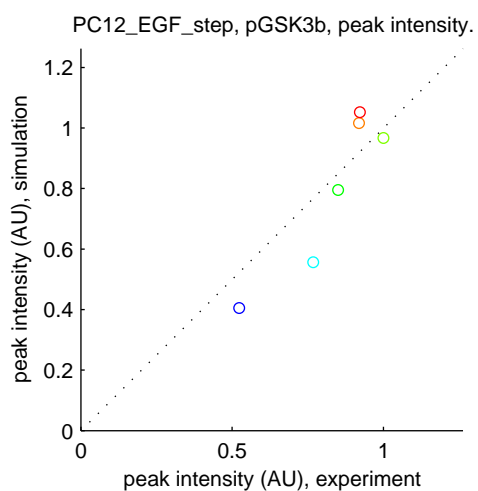
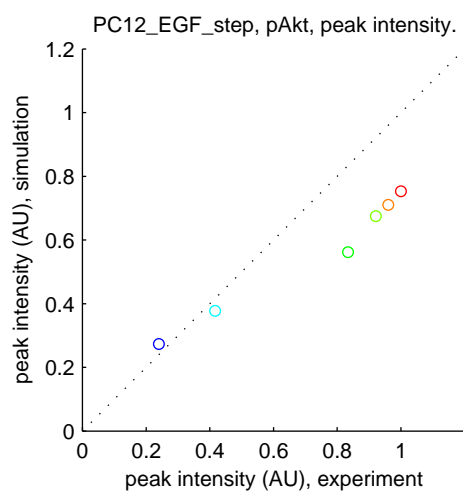
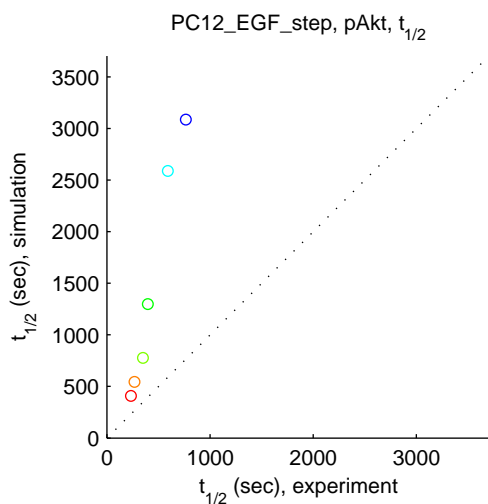
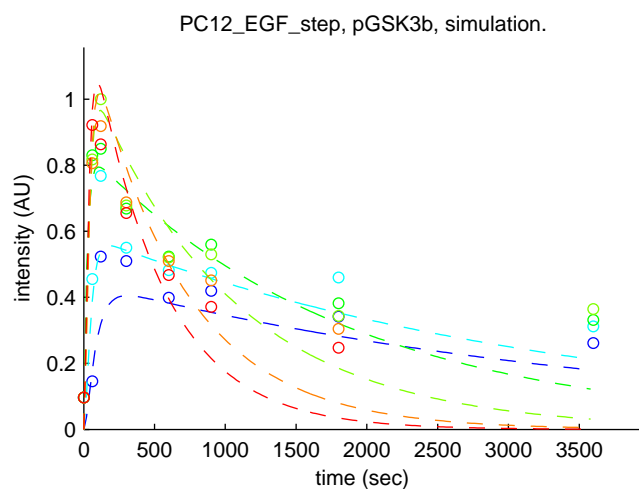
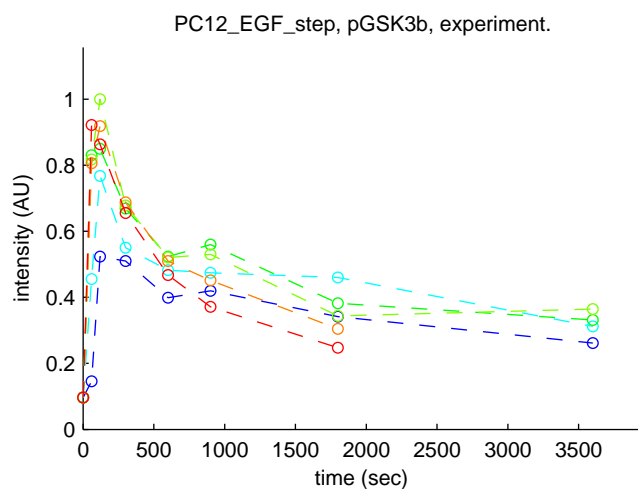
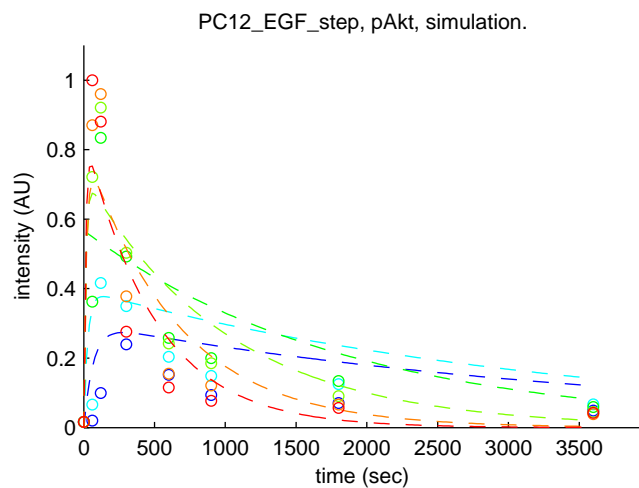
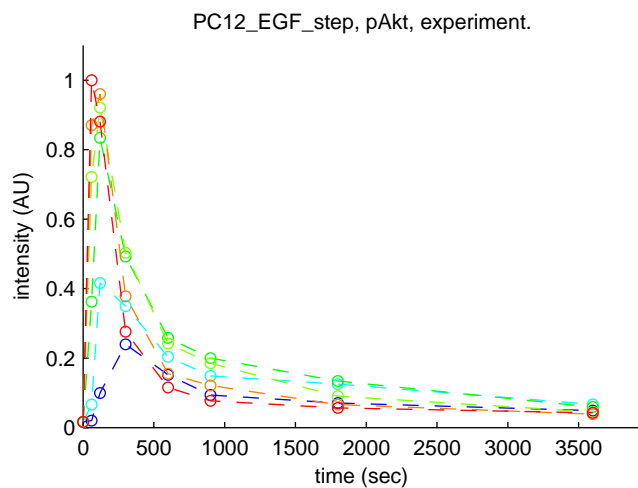
PC12_EGF_step, pAkt, $t_{1/2}$ 

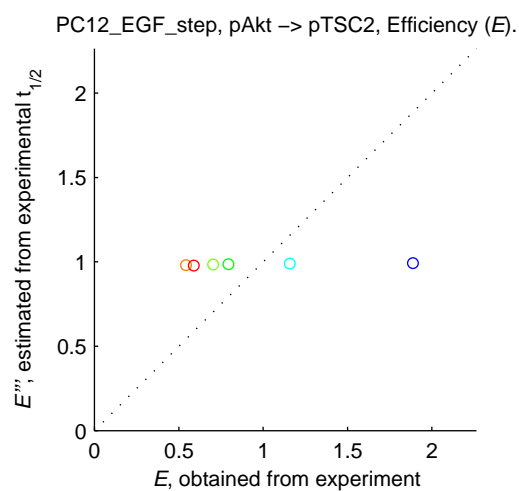
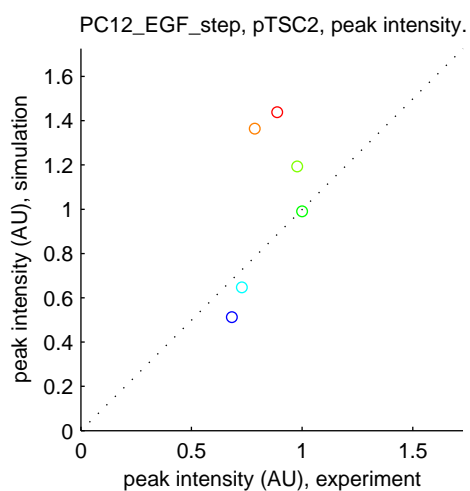
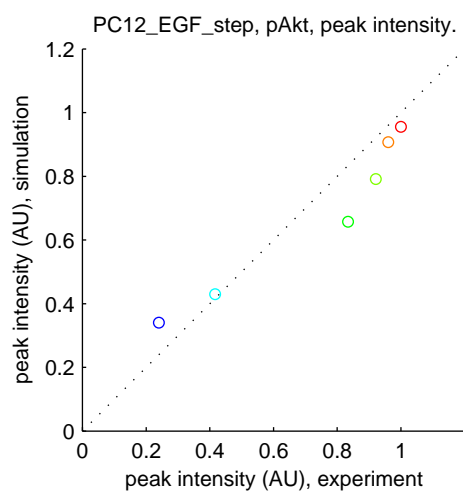
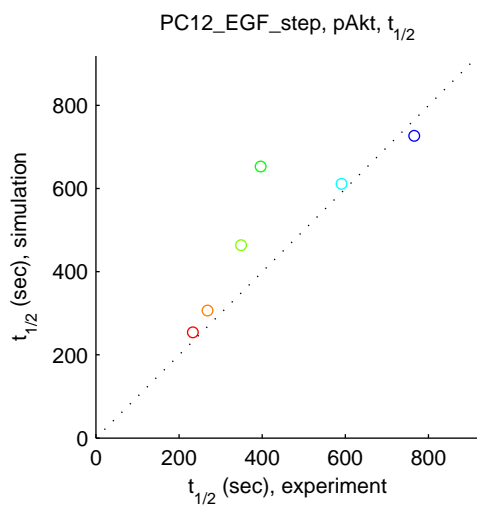
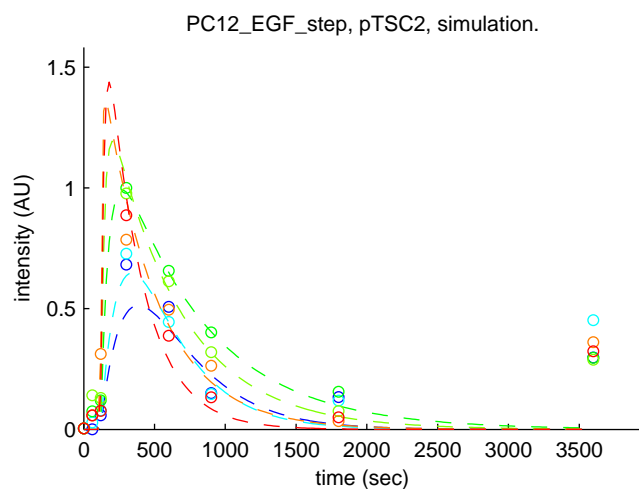
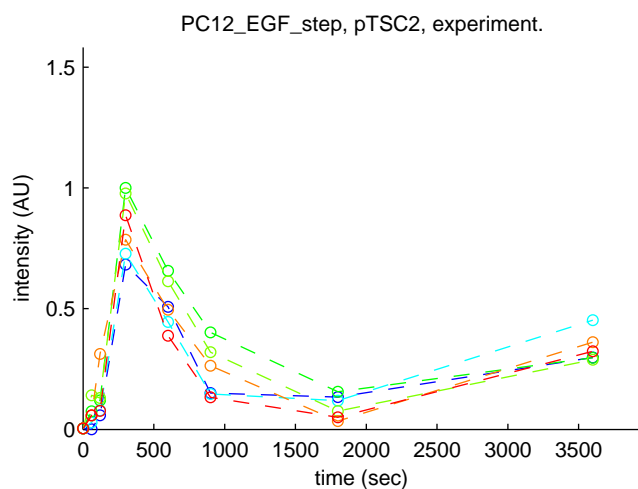
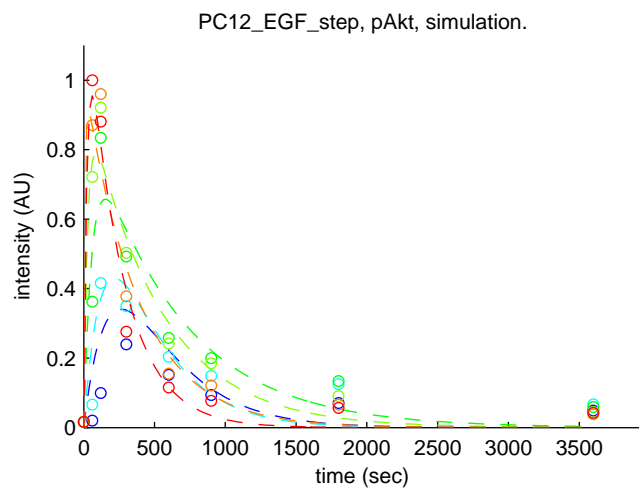
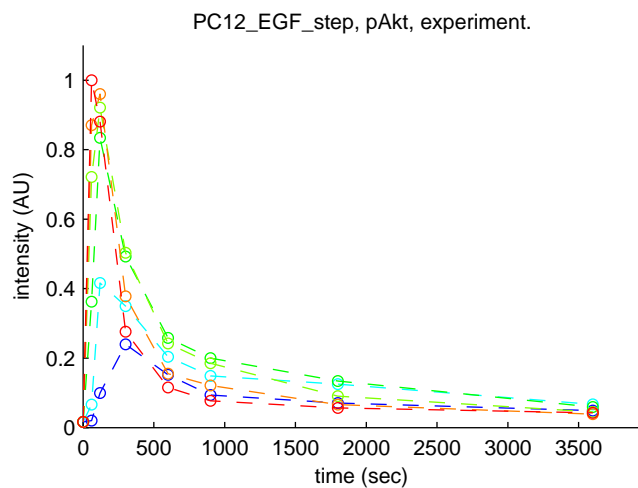
PC12_EGF_step, pAkt, peak intensity.



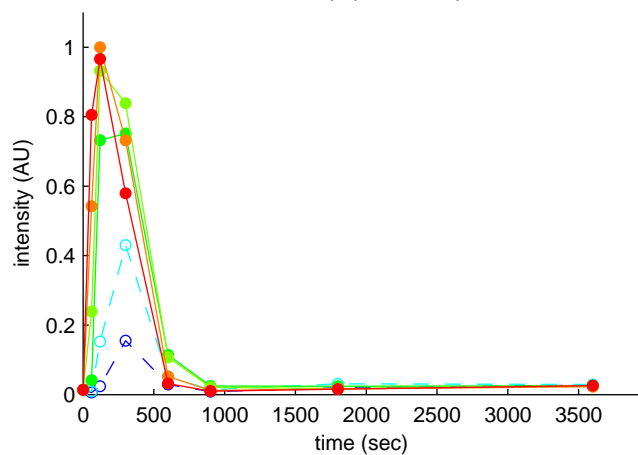
PC12_EGF_step, pElF4B, peak intensity.

PC12_EGF_step, pAkt → pElF4B, Efficiency (E).

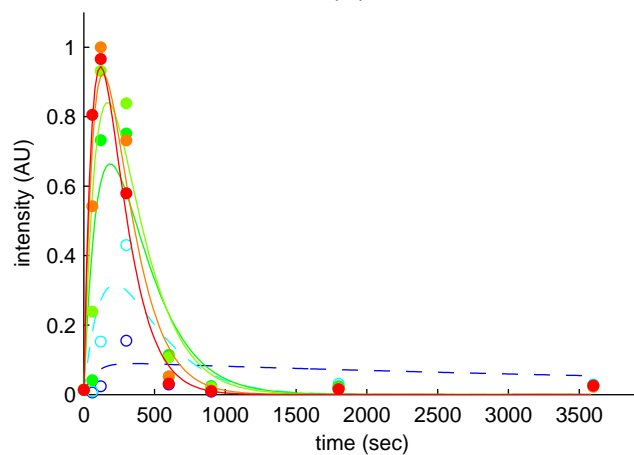




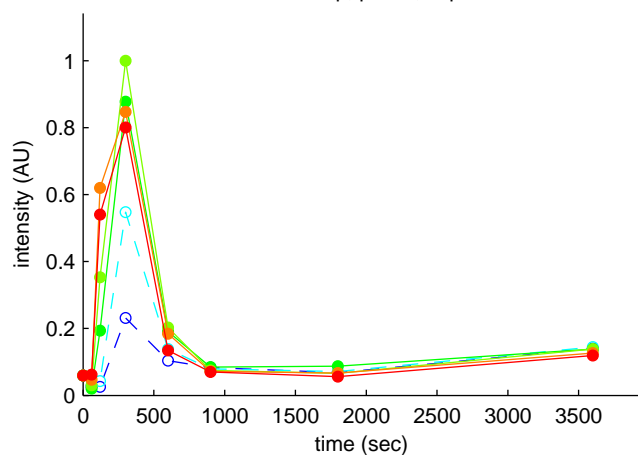
PC12_EGF_step, pERK1, experiment.



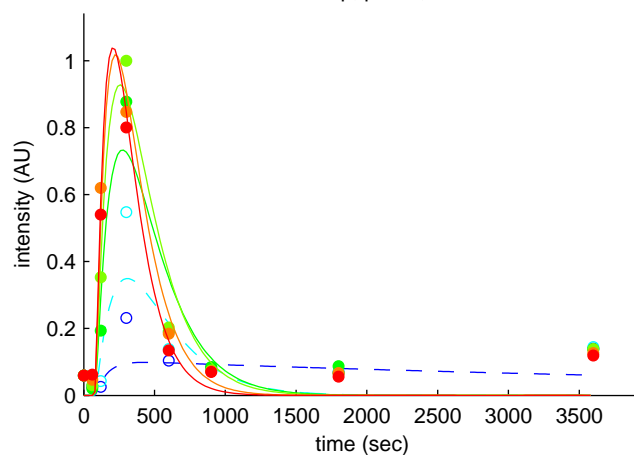
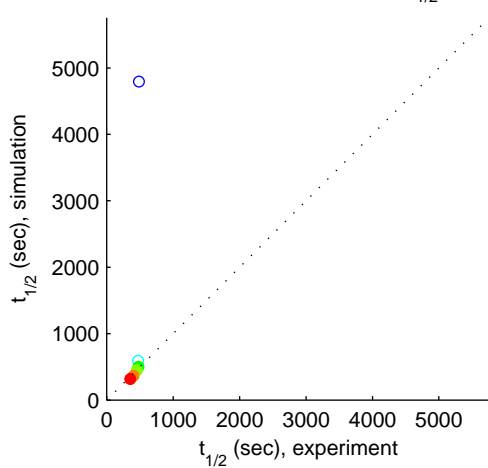
PC12_EGF_step, pERK1, simulation.



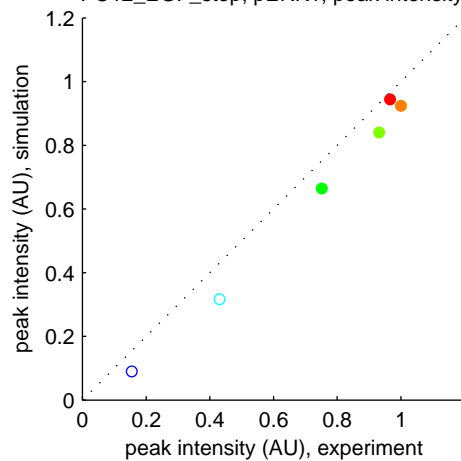
PC12_EGF_step, pRSK, experiment.



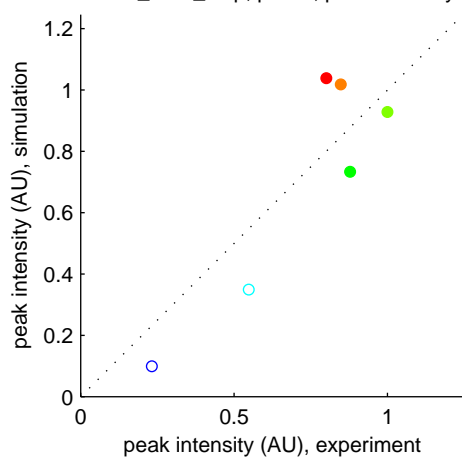
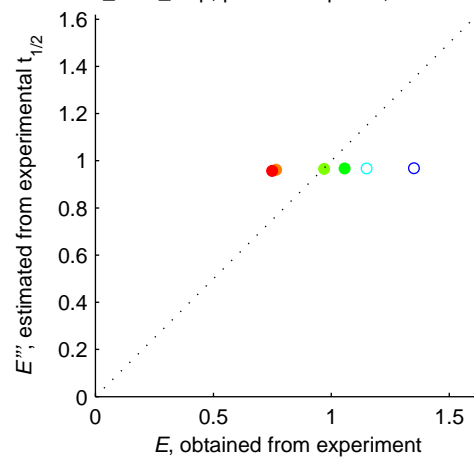
PC12_EGF_step, pRSK, simulation.

PC12_EGF_step, pERK1, $t_{1/2}$ 

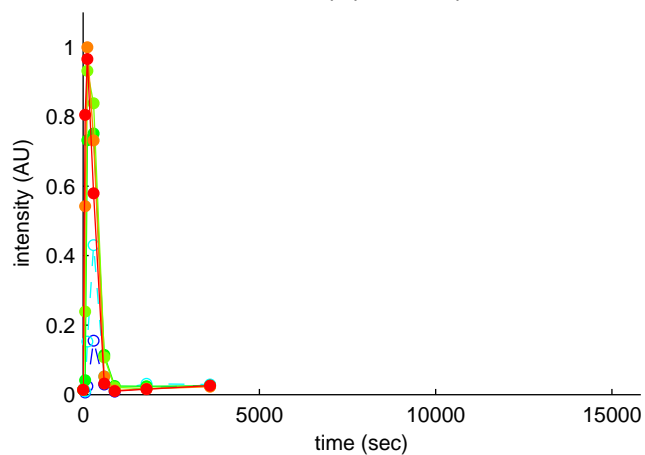
PC12_EGF_step, pERK1, peak intensity.



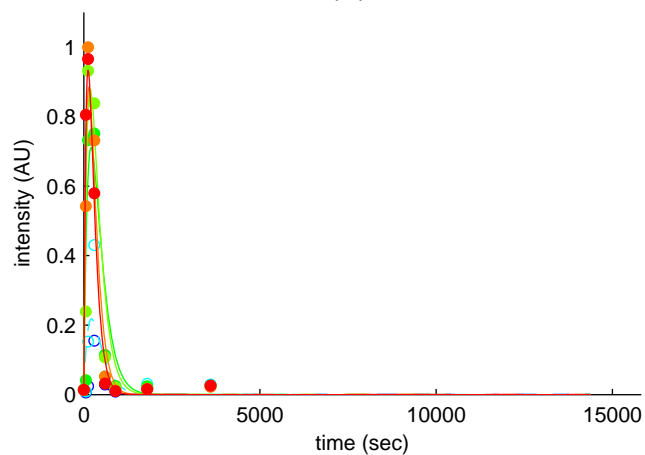
PC12_EGF_step, pRSK, peak intensity.

PC12_EGF_step, pERK1 \rightarrow pRSK, Efficiency (E).

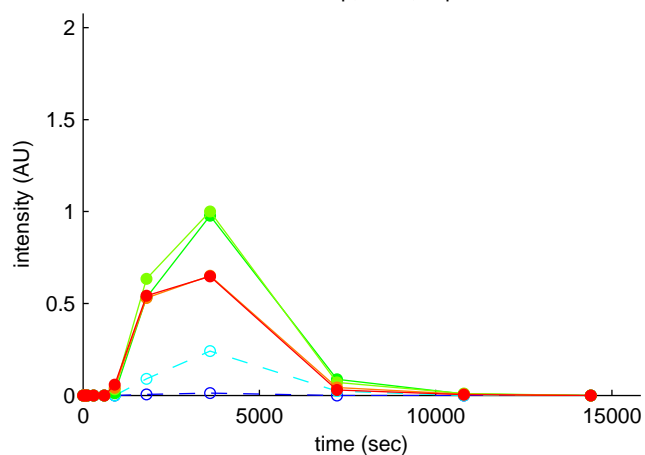
PC12_EGF_step, pERK1, experiment.



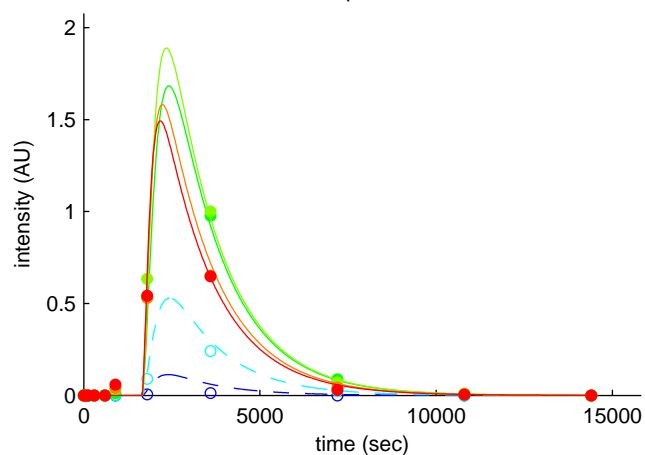
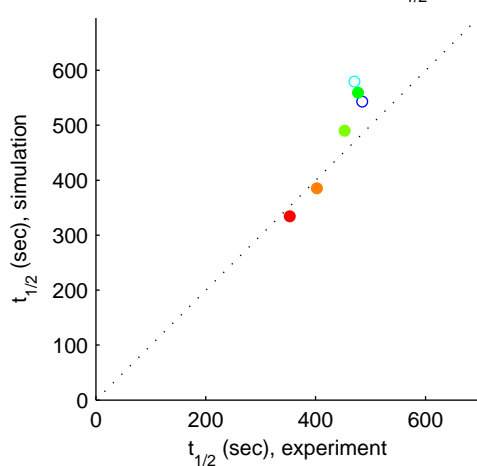
PC12_EGF_step, pERK1, simulation.



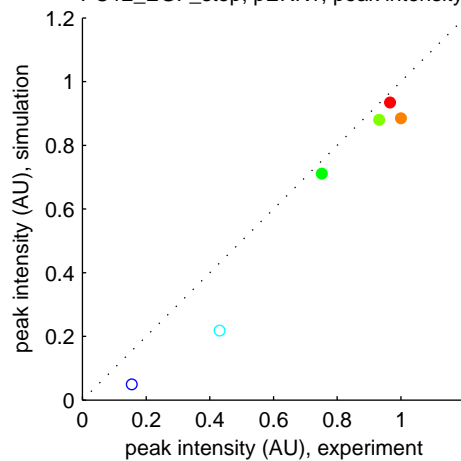
PC12_EGF_step, cFos, experiment.



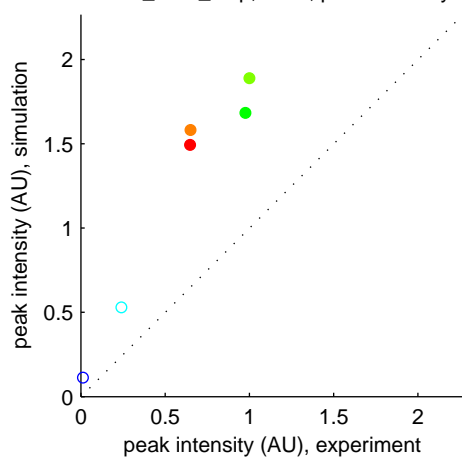
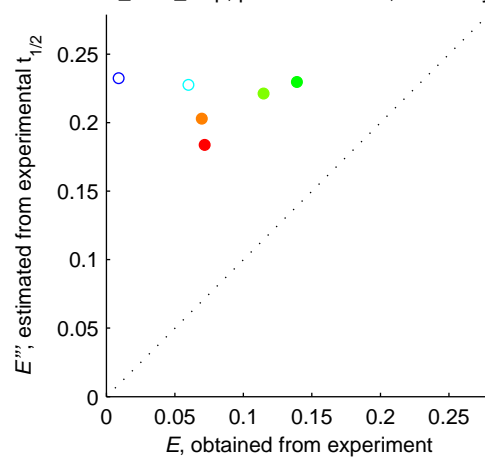
PC12_EGF_step, cFos, simulation.

PC12_EGF_step, pERK1, $t_{1/2}$ 

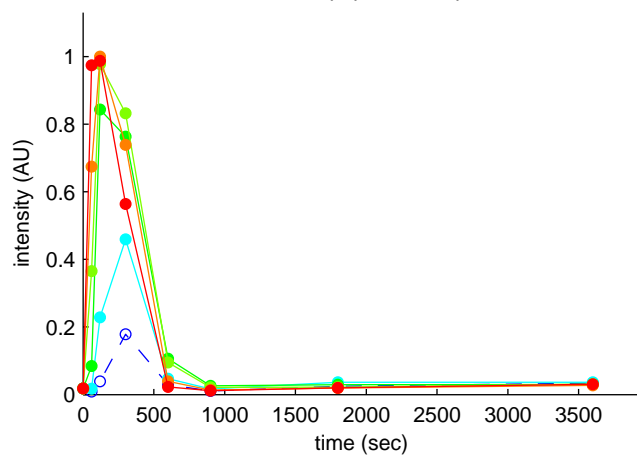
PC12_EGF_step, pERK1, peak intensity.



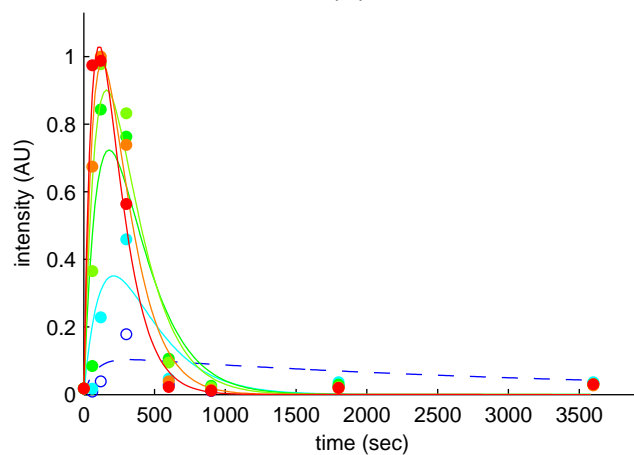
PC12_EGF_step, cFos, peak intensity.

PC12_EGF_step, pERK1 \rightarrow cFos, Efficiency (E).

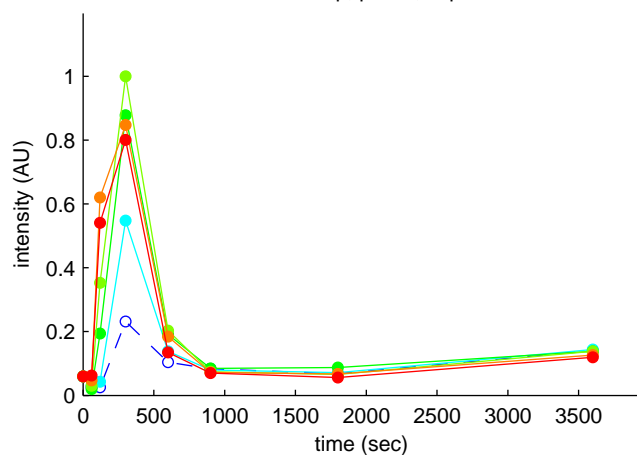
PC12_EGF_step, pERK2, experiment.



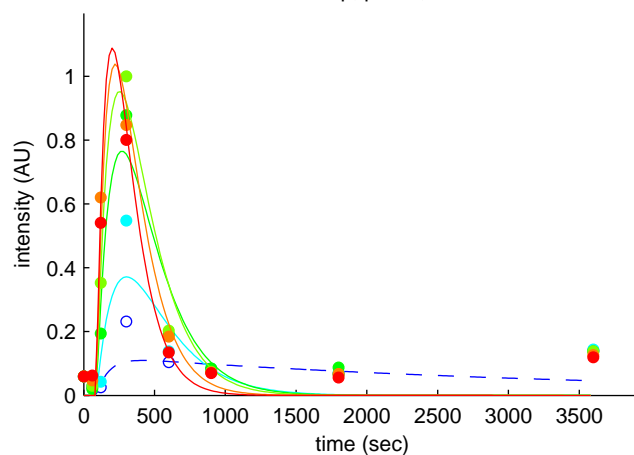
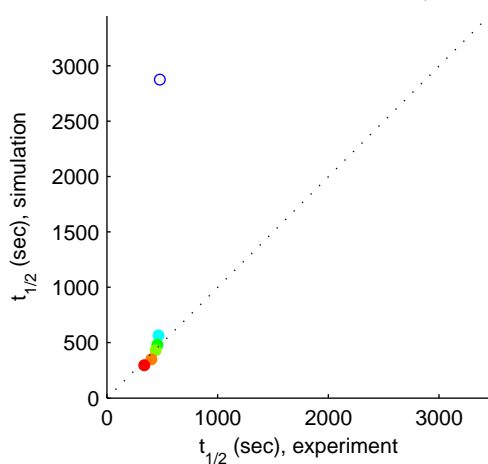
PC12_EGF_step, pERK2, simulation.



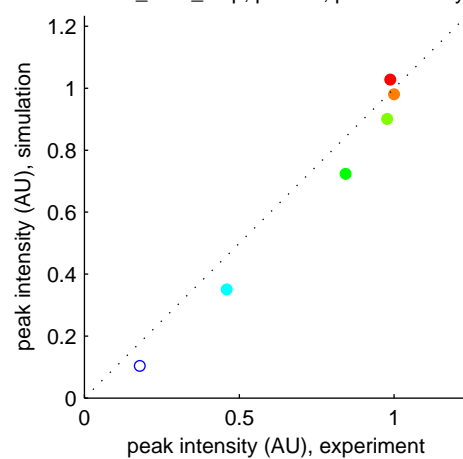
PC12_EGF_step, pRSK, experiment.



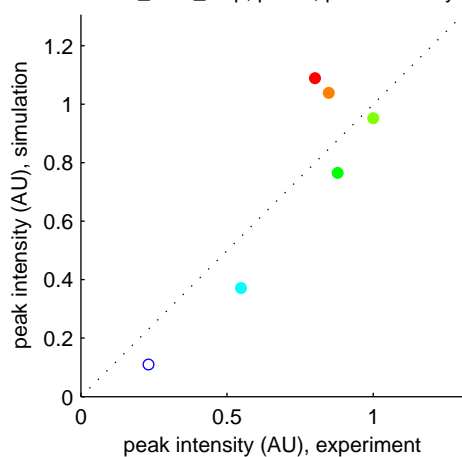
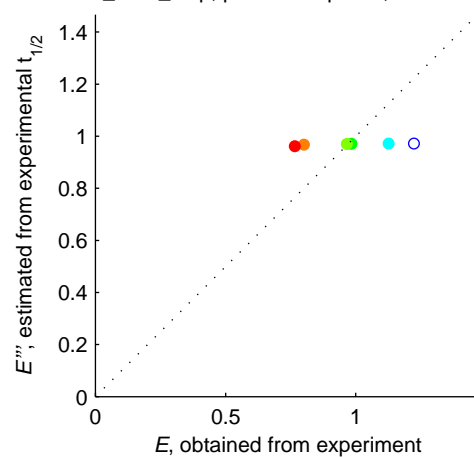
PC12_EGF_step, pRSK, simulation.

PC12_EGF_step, pERK2, $t_{1/2}$ 

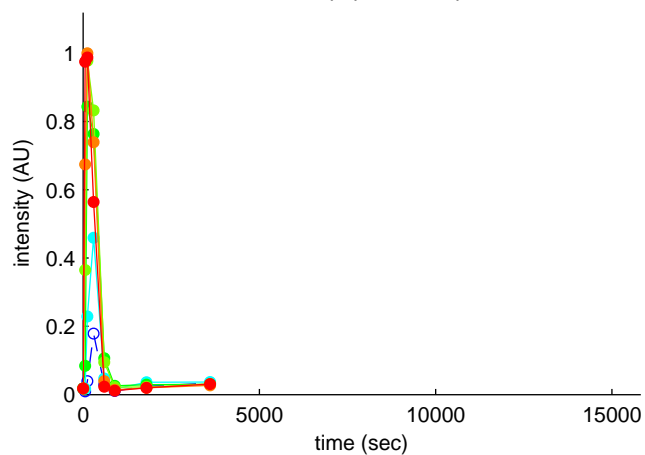
PC12_EGF_step, pERK2, peak intensity.



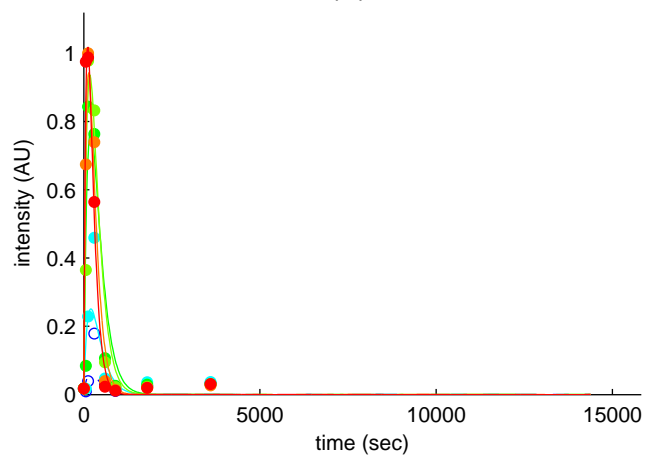
PC12_EGF_step, pRSK, peak intensity.

PC12_EGF_step, pERK2 \rightarrow pRSK, Efficiency (E).

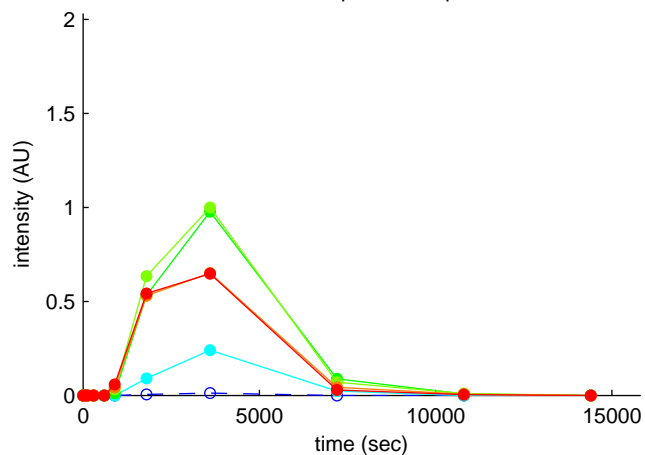
PC12_EGF_step, pERK2, experiment.



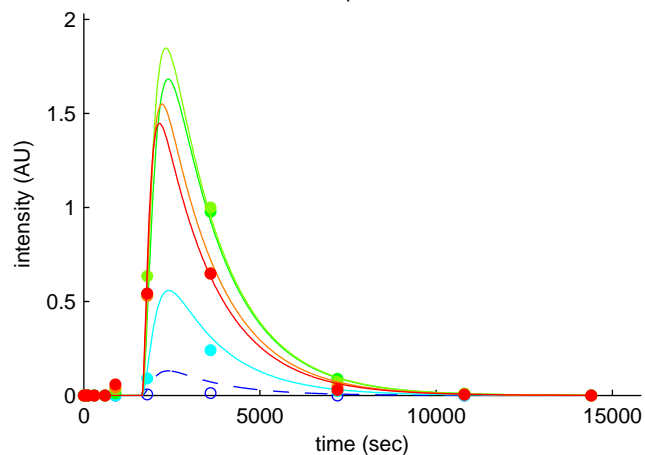
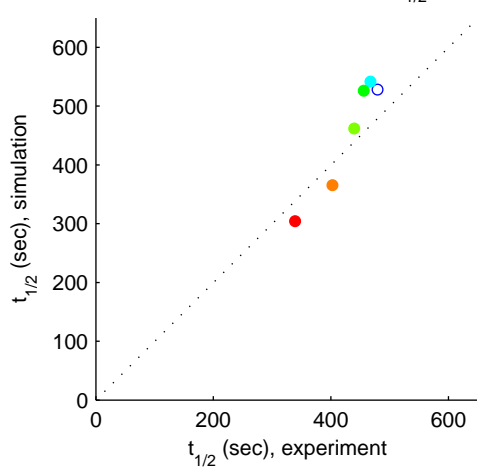
PC12_EGF_step, pERK2, simulation.



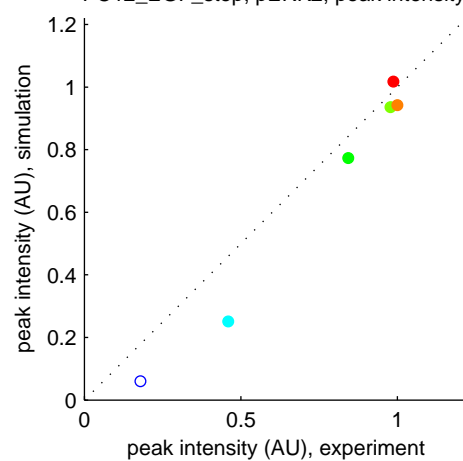
PC12_EGF_step, cFos, experiment.



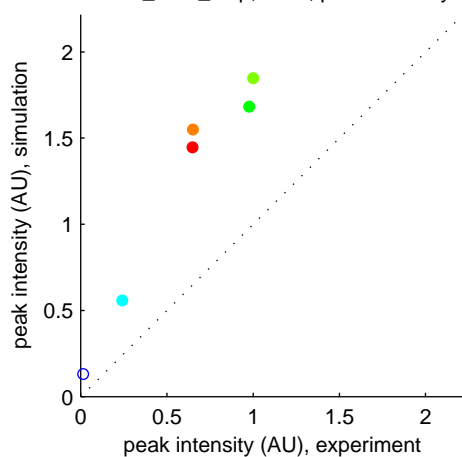
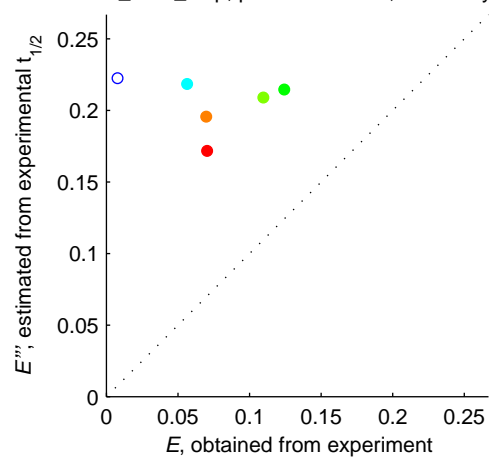
PC12_EGF_step, cFos, simulation.

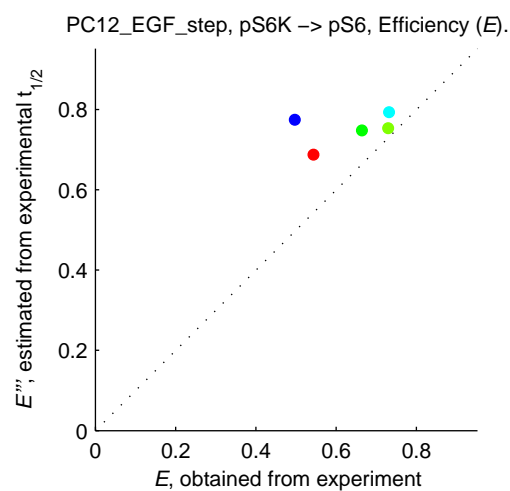
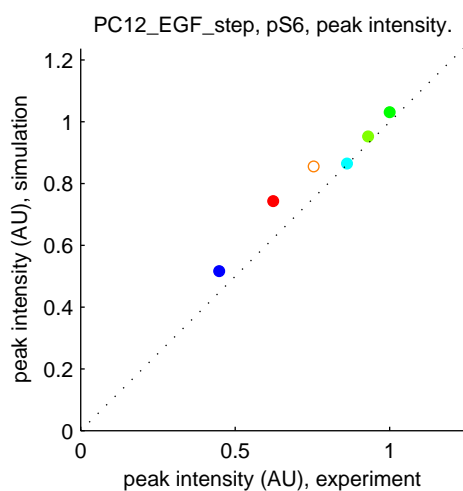
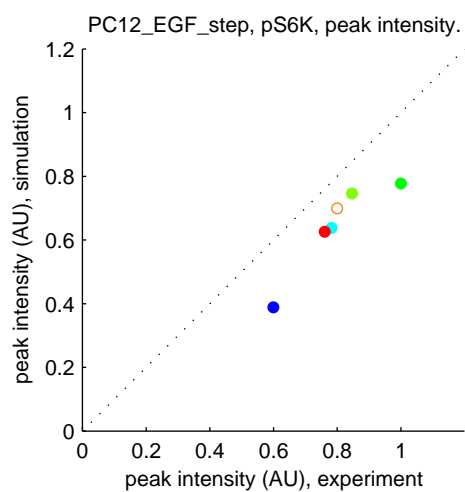
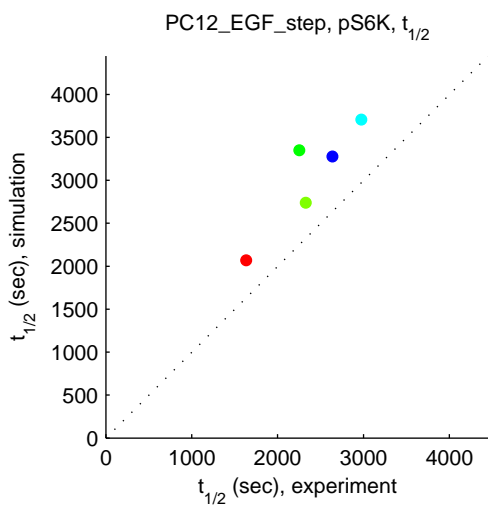
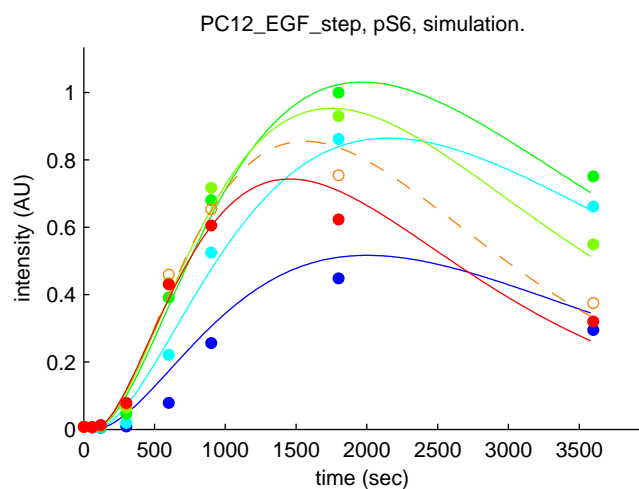
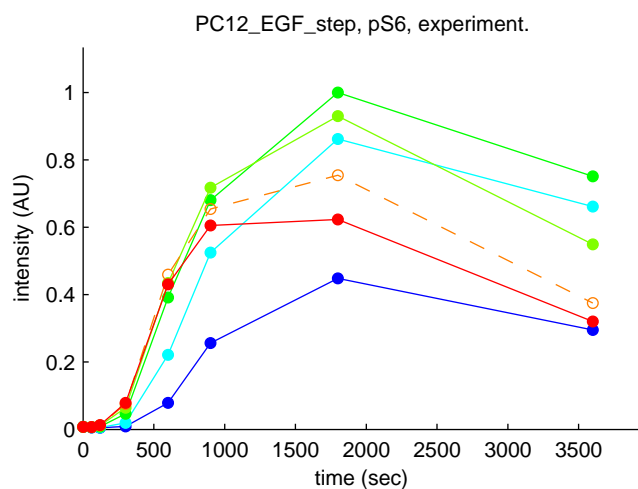
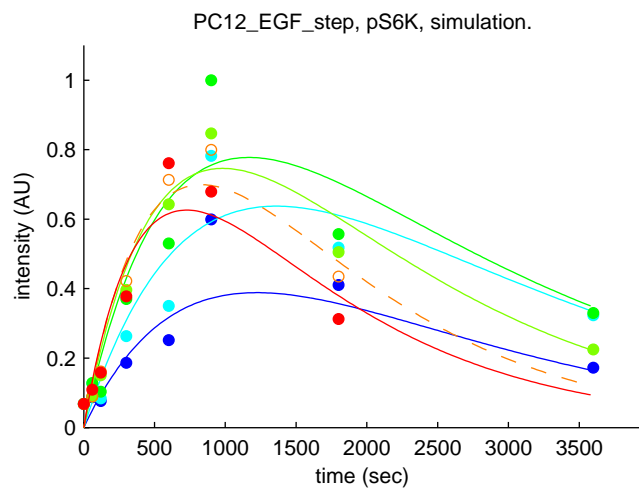
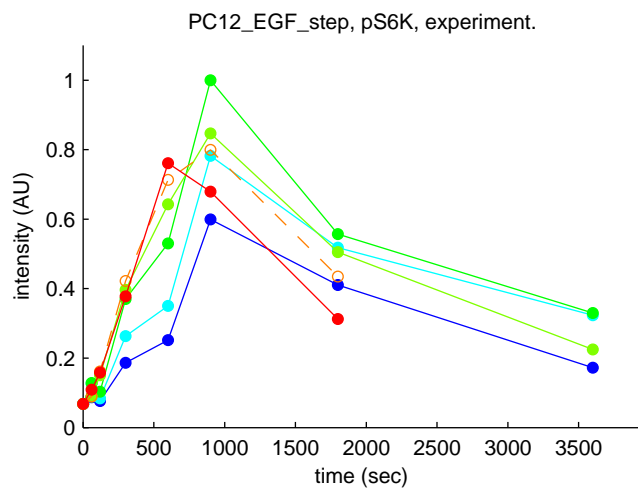
PC12_EGF_step, pERK2, $t_{1/2}$ 

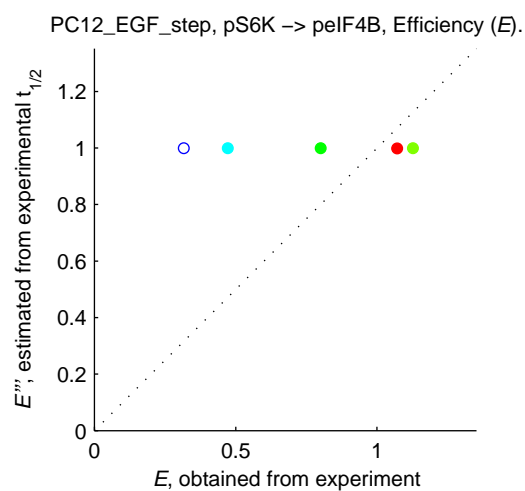
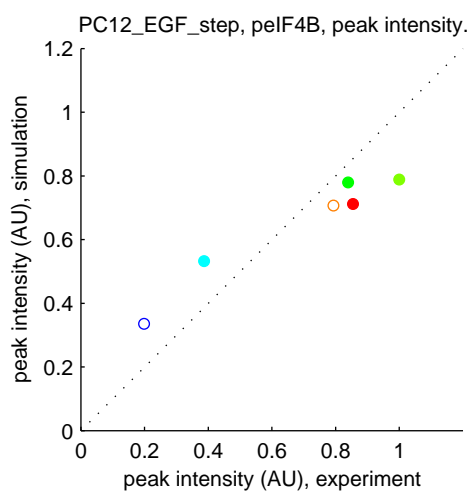
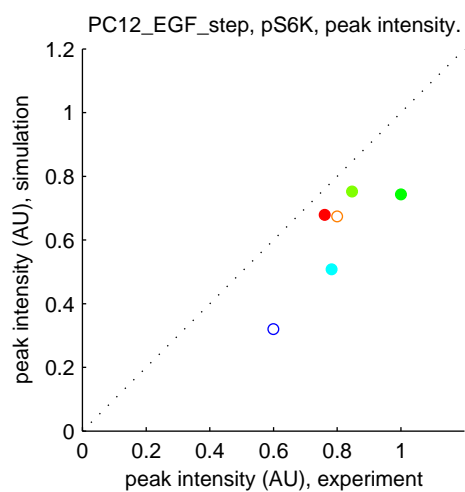
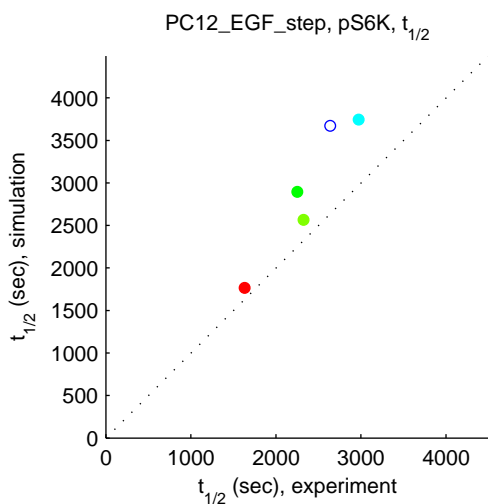
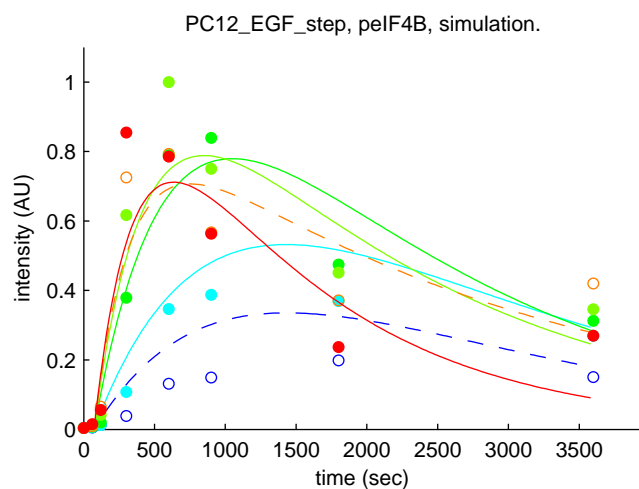
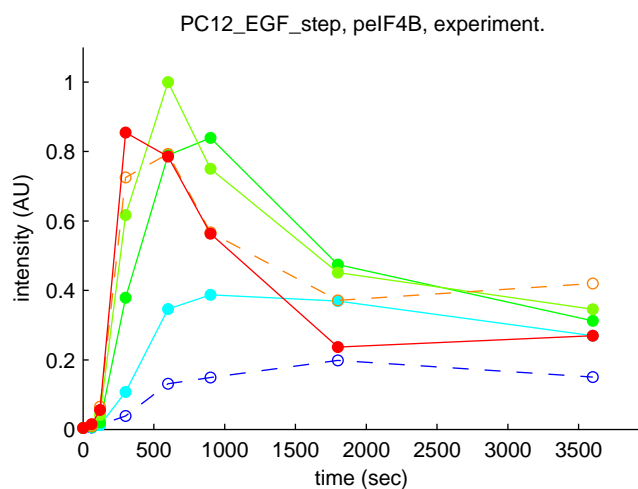
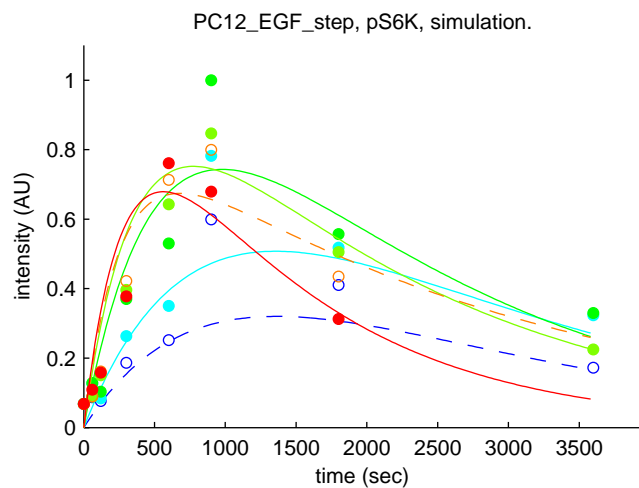
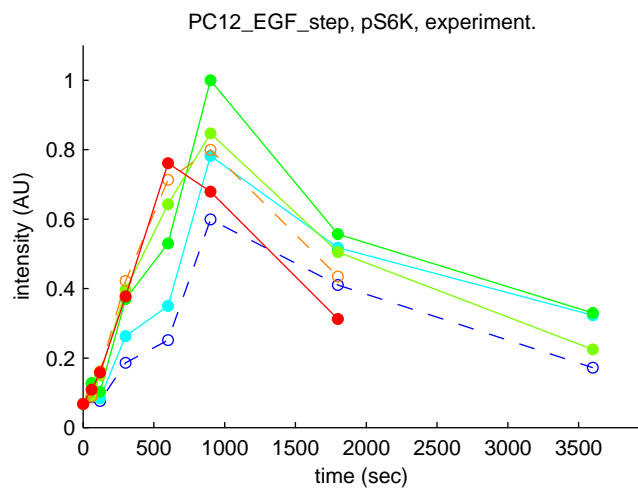
PC12_EGF_step, pERK2, peak intensity.



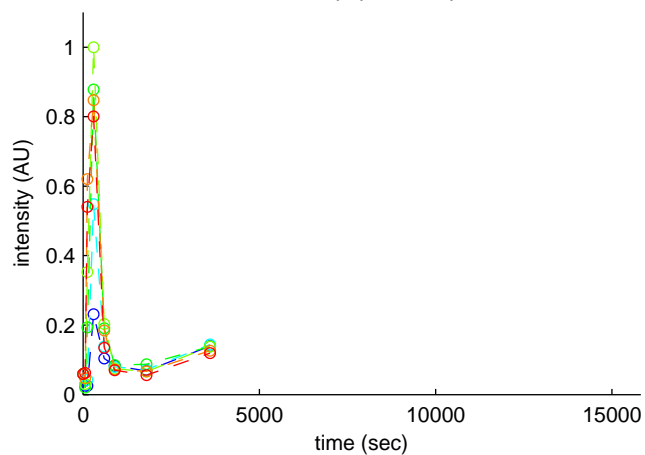
PC12_EGF_step, cFos, peak intensity.

PC12_EGF_step, pERK2 \rightarrow cFos, Efficiency (E).

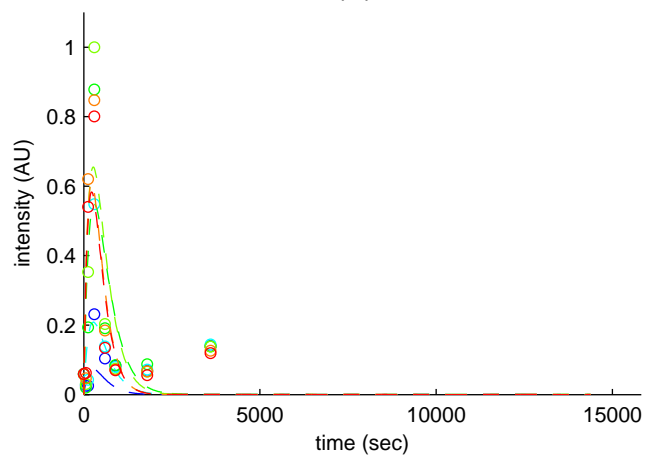




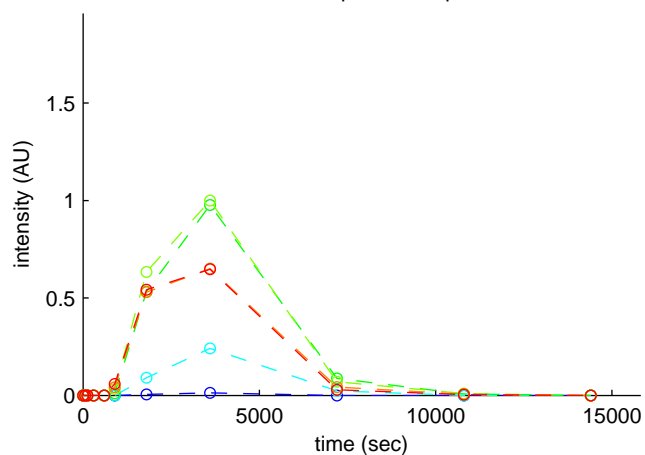
PC12_EGF_step, pRSK, experiment.



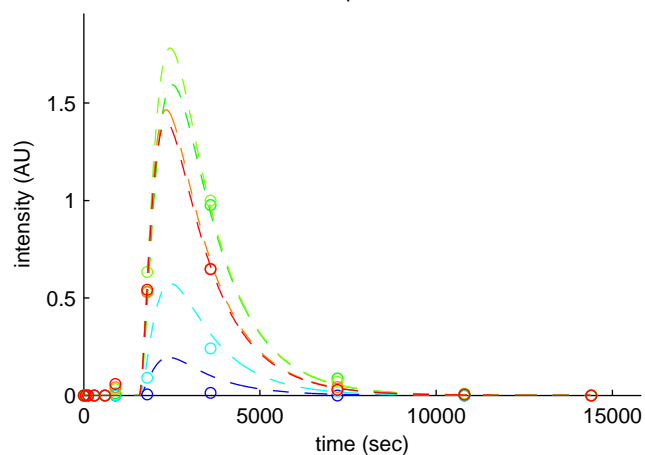
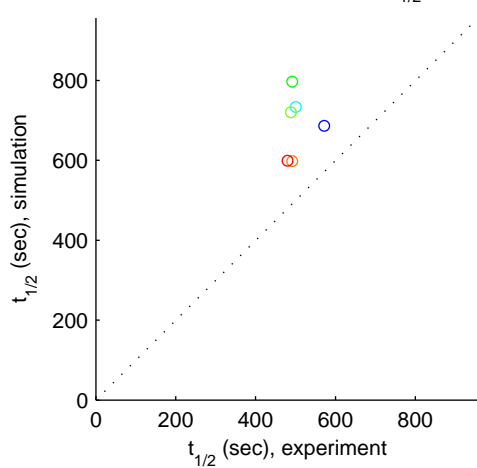
PC12_EGF_step, pRSK, simulation.



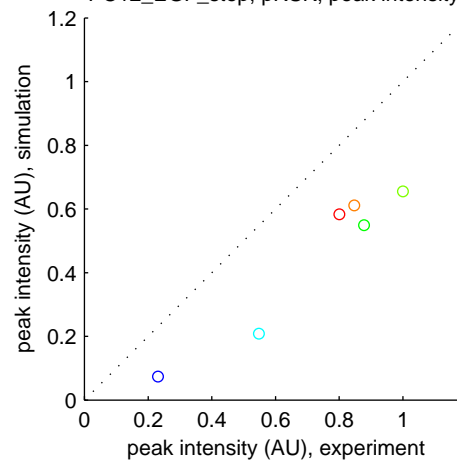
PC12_EGF_step, cFos, experiment.



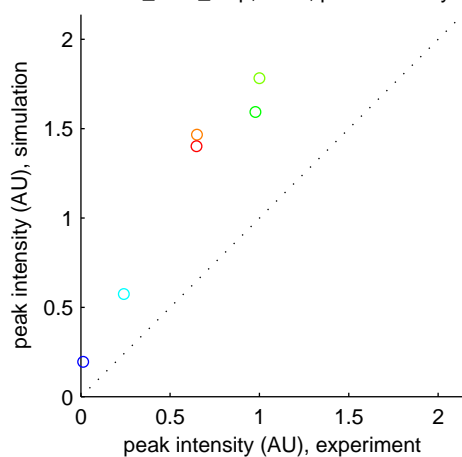
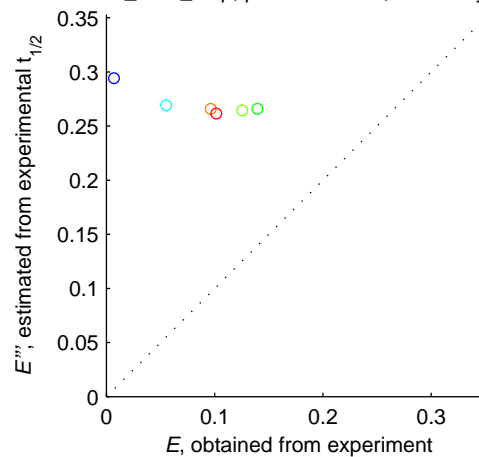
PC12_EGF_step, cFos, simulation.

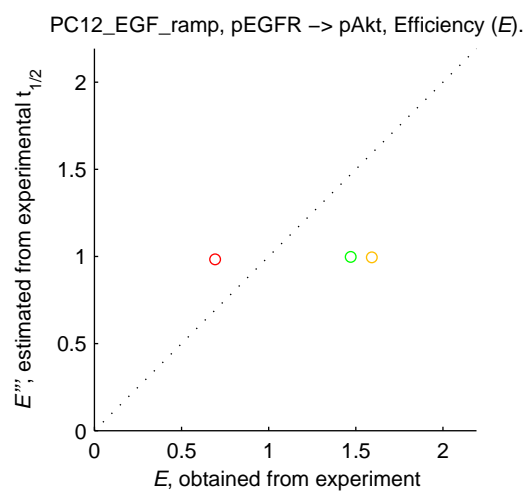
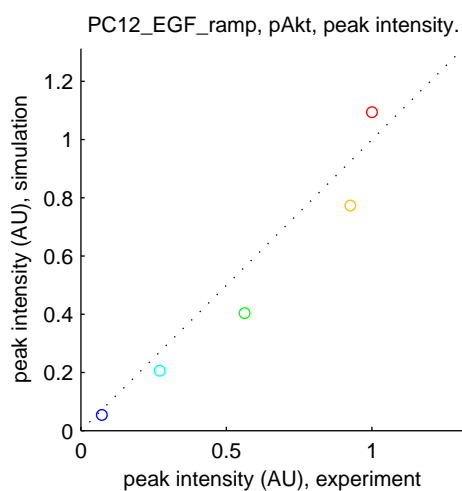
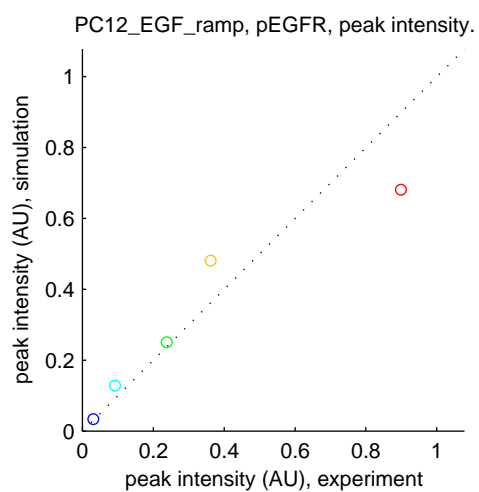
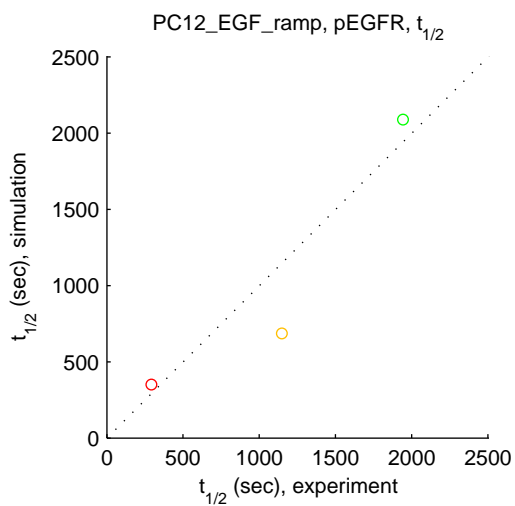
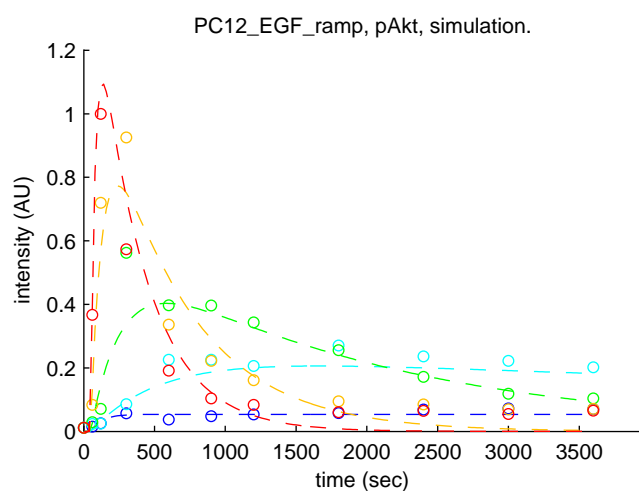
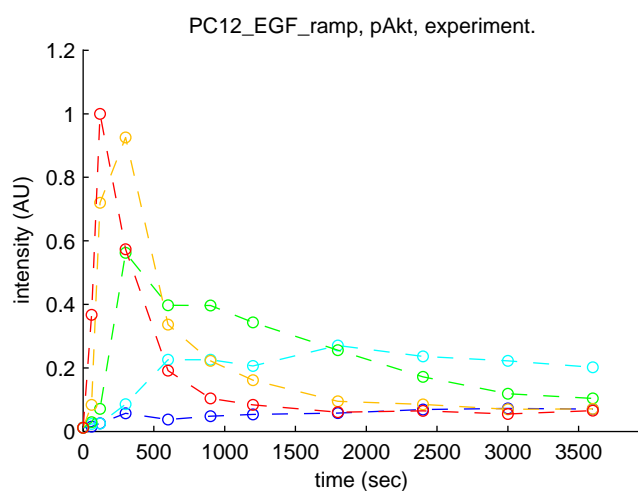
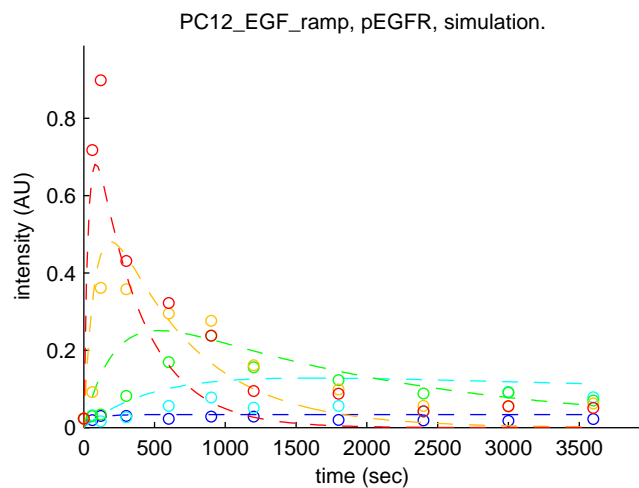
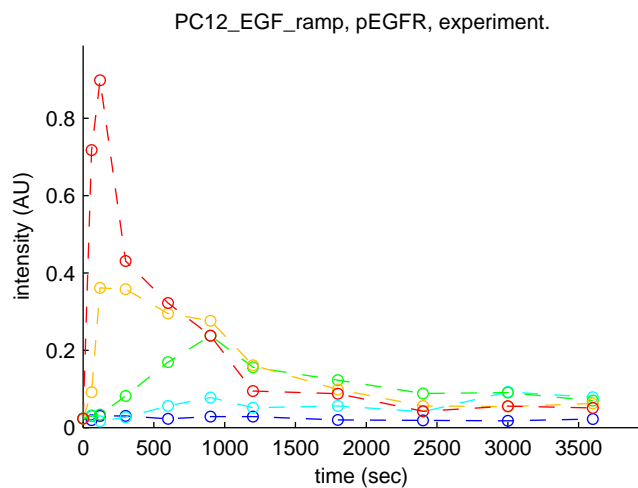
PC12_EGF_step, pRSK, $t_{1/2}$ 

PC12_EGF_step, pRSK, peak intensity.

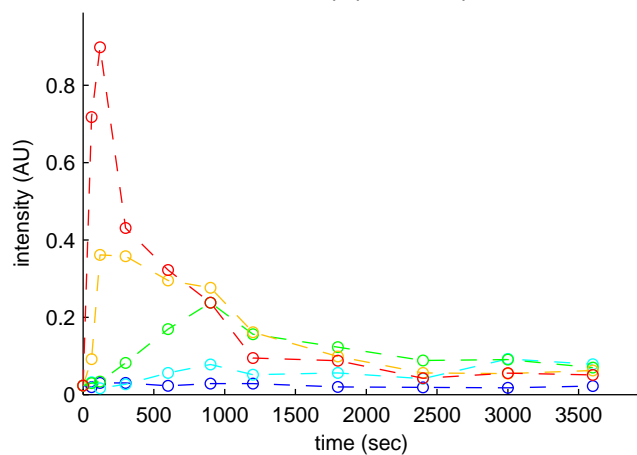


PC12_EGF_step, cFos, peak intensity.

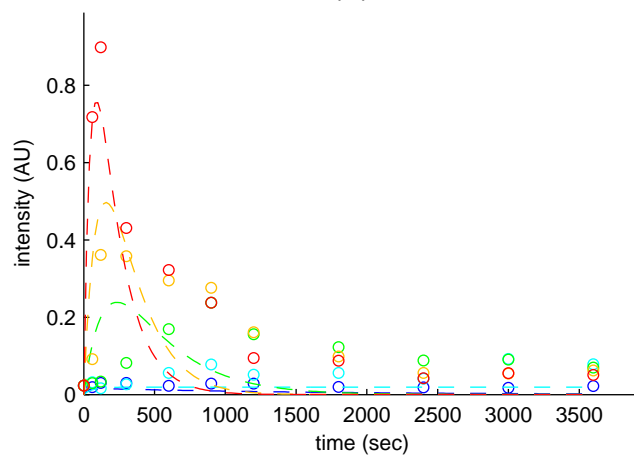
PC12_EGF_step, pRSK \rightarrow cFos, Efficiency (E).



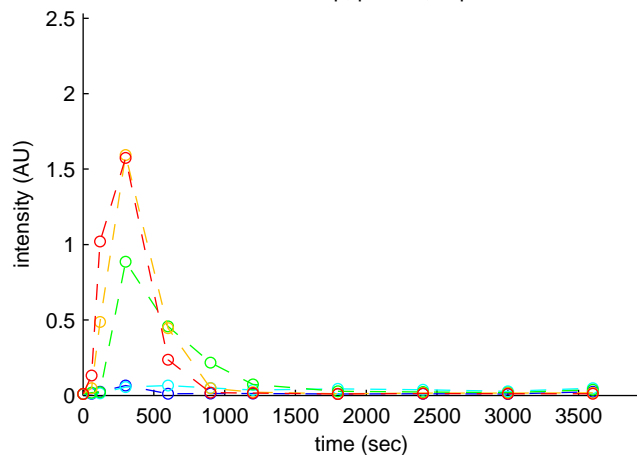
PC12_EGF_ramp, pEGFR, experiment.



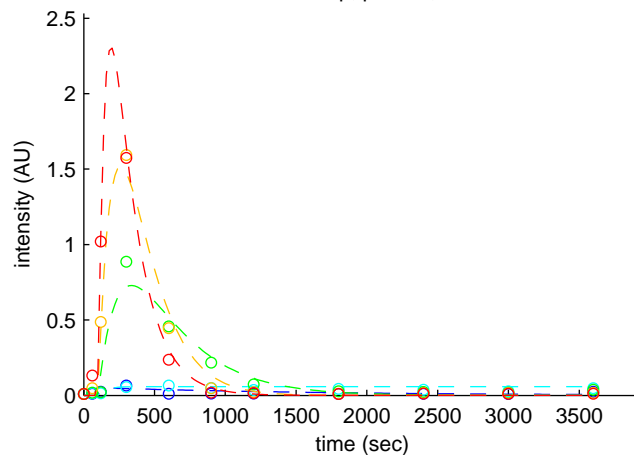
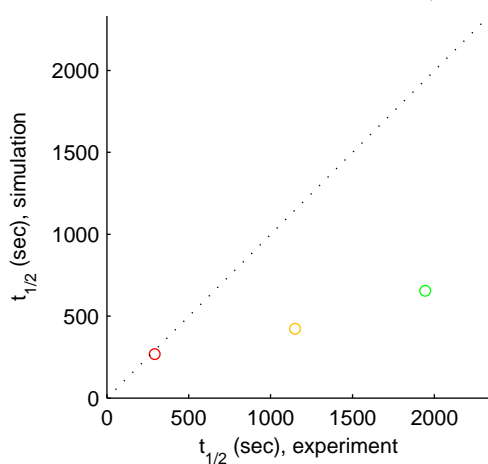
PC12_EGF_ramp, pEGFR, simulation.



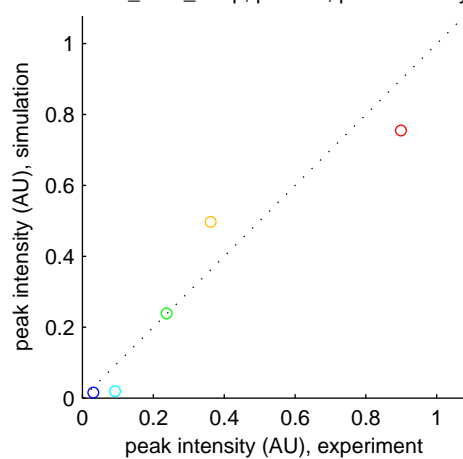
PC12_EGF_ramp, pERK1, experiment.



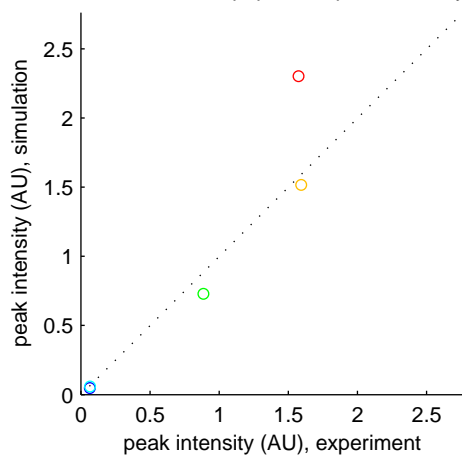
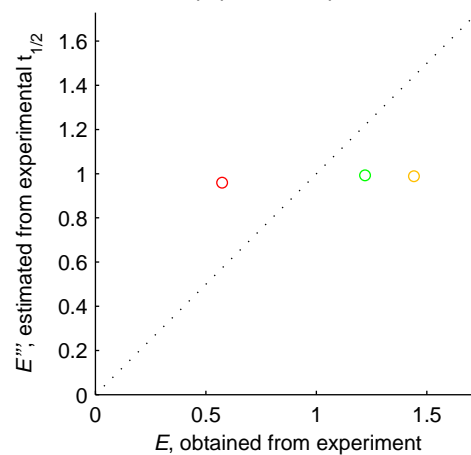
PC12_EGF_ramp, pERK1, simulation.

PC12_EGF_ramp, pEGFR, $t_{1/2}$ 

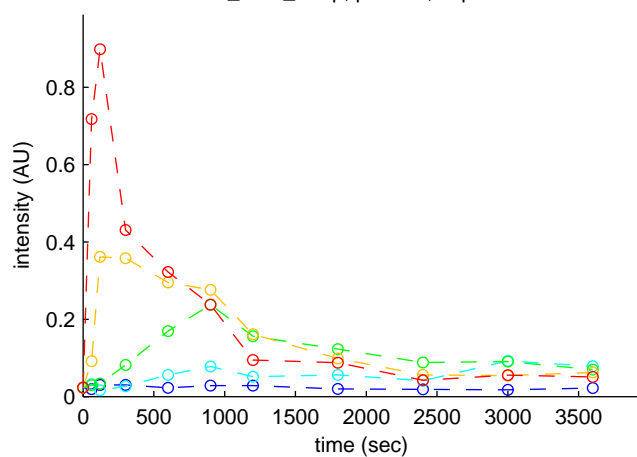
PC12_EGF_ramp, pEGFR, peak intensity.



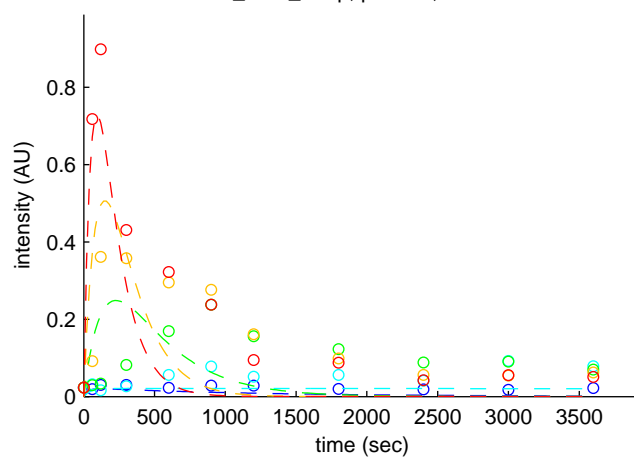
PC12_EGF_ramp, pERK1, peak intensity.

PC12_EGF_ramp, pEGFR \rightarrow pERK1, Efficiency (E).

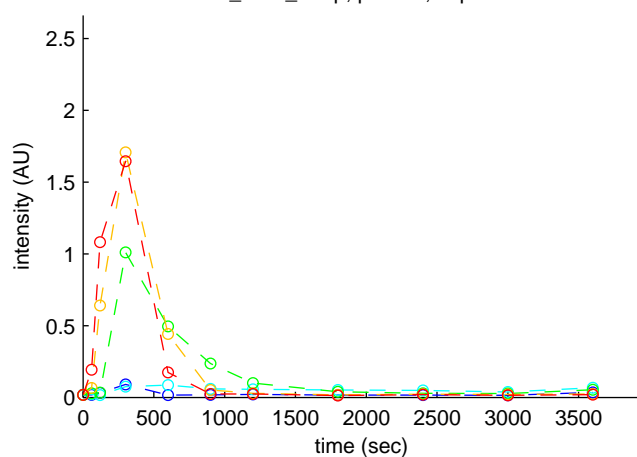
PC12_EGF_ramp, pEGFR, experiment.



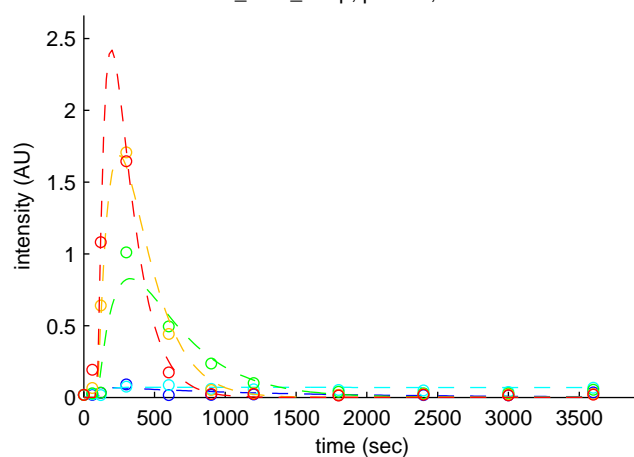
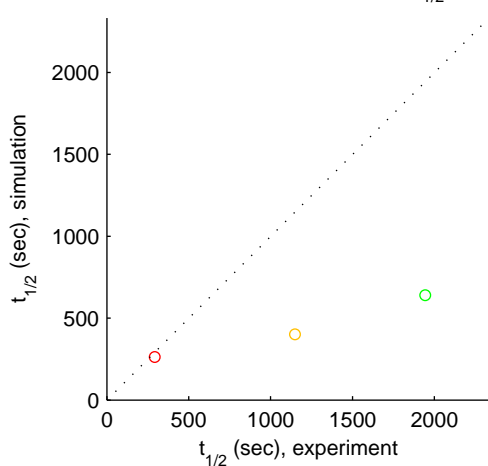
PC12_EGF_ramp, pEGFR, simulation.



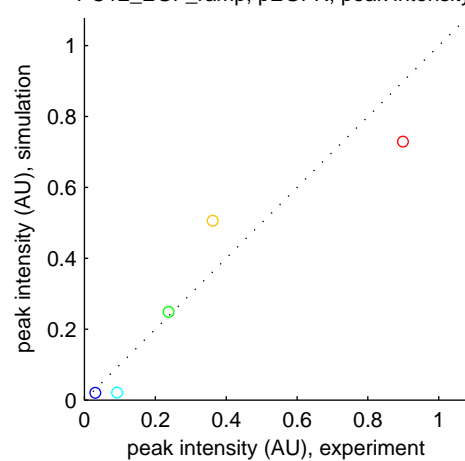
PC12_EGF_ramp, pERK2, experiment.



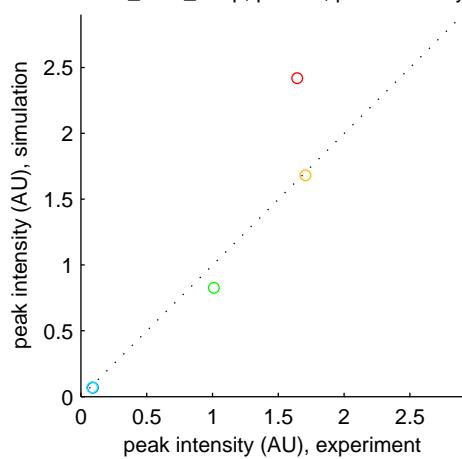
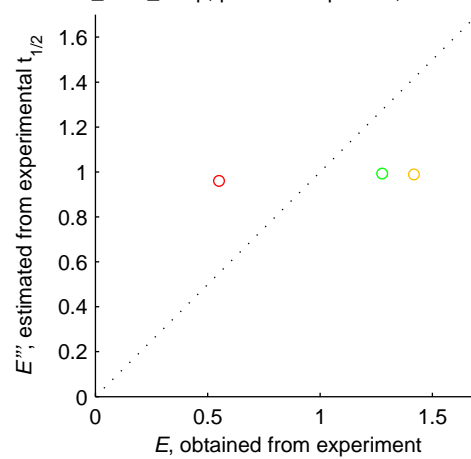
PC12_EGF_ramp, pERK2, simulation.

PC12_EGF_ramp, pEGFR, $t_{1/2}$ 

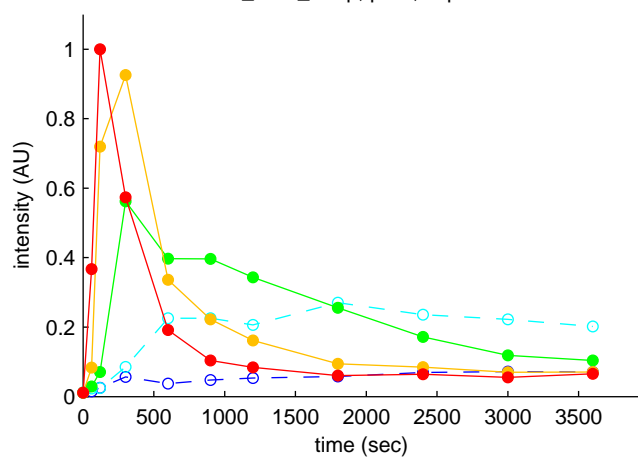
PC12_EGF_ramp, pEGFR, peak intensity.



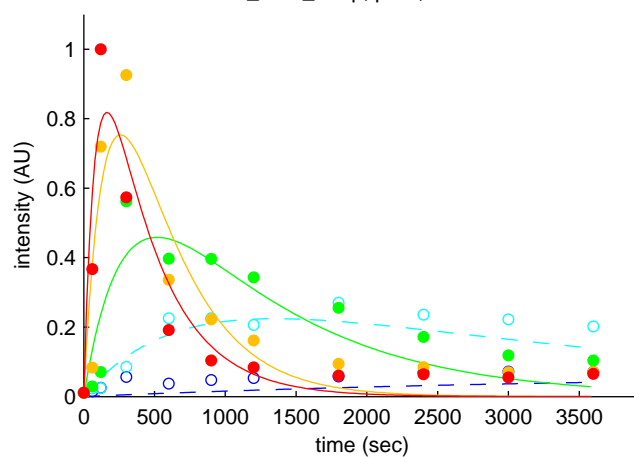
PC12_EGF_ramp, pERK2, peak intensity.

PC12_EGF_ramp, pEGFR \rightarrow pERK2, Efficiency (E).

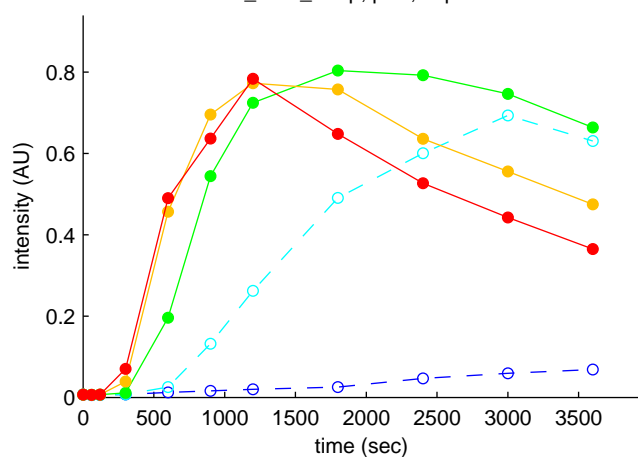
PC12_EGF_ramp, pAkt, experiment.



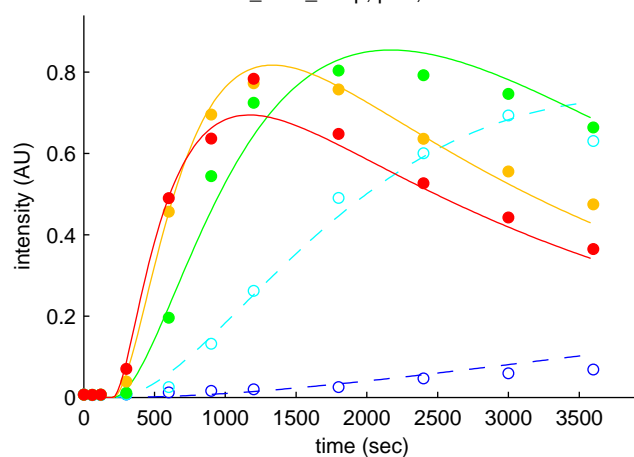
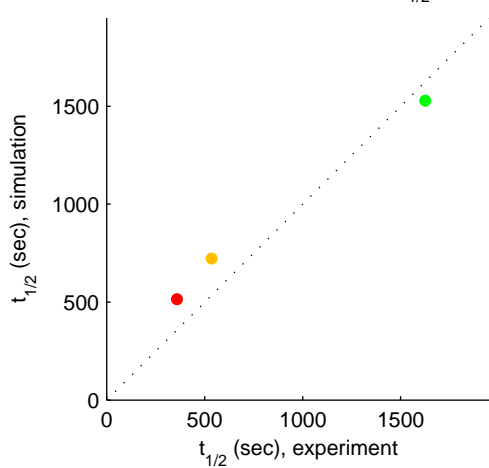
PC12_EGF_ramp, pAkt, simulation.



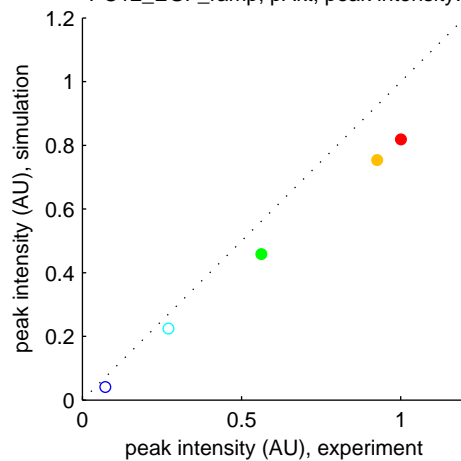
PC12_EGF_ramp, pS6, experiment.



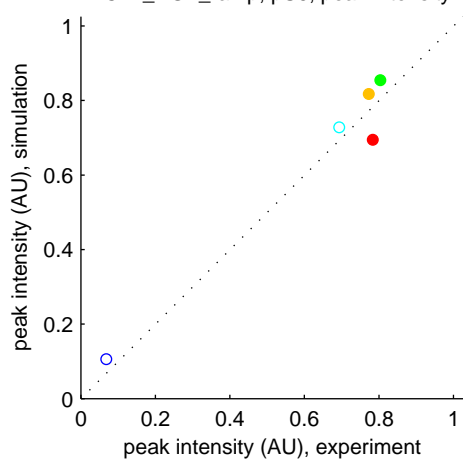
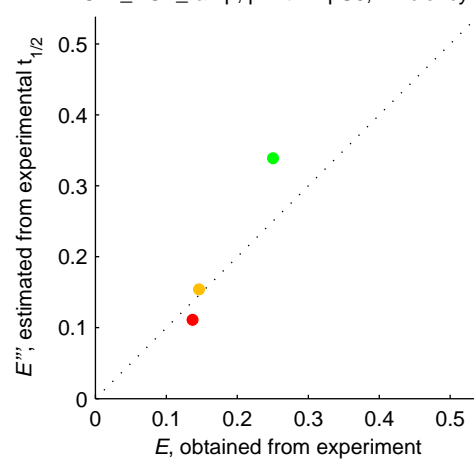
PC12_EGF_ramp, pS6, simulation.

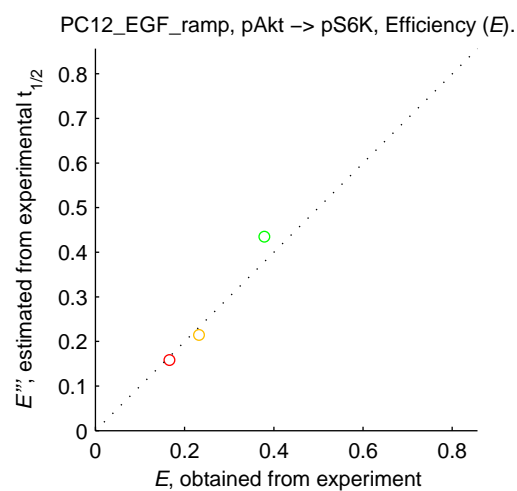
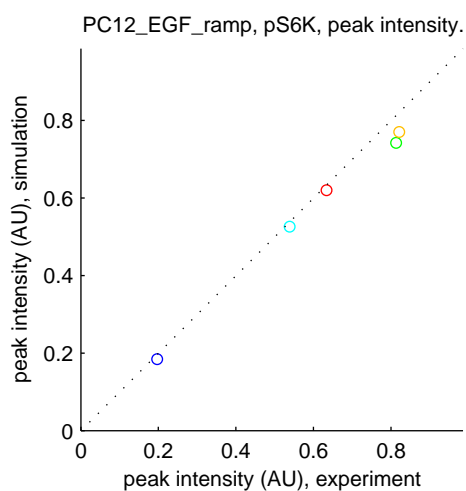
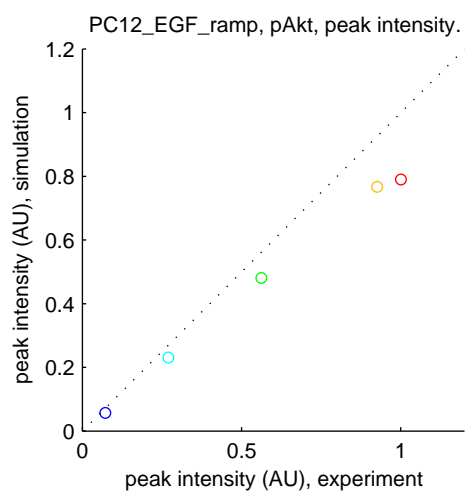
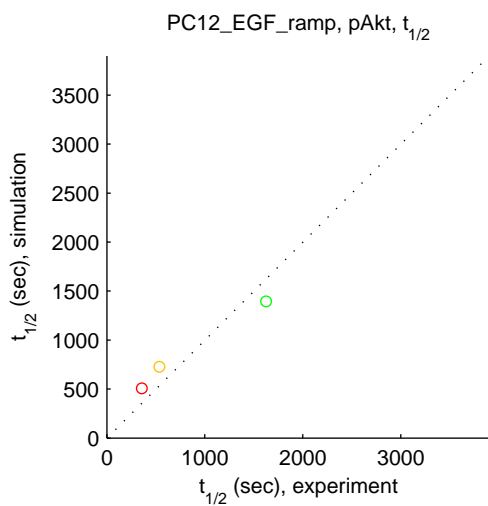
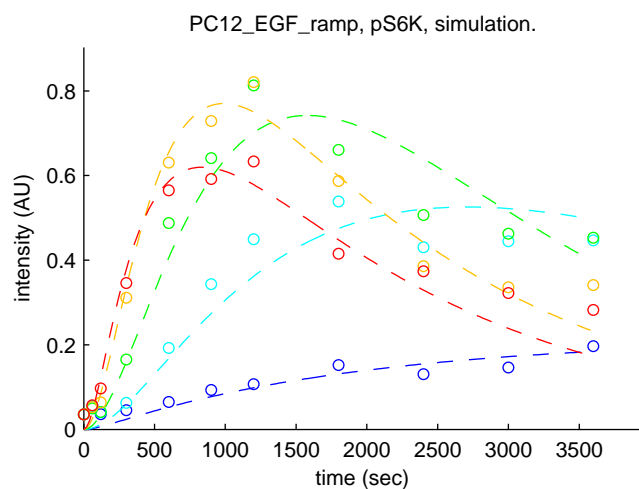
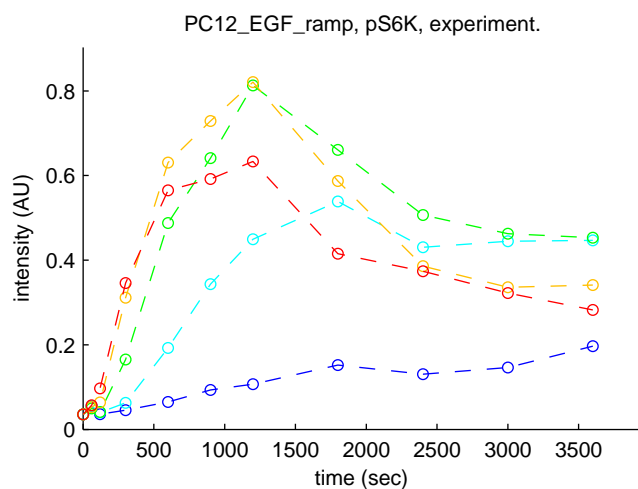
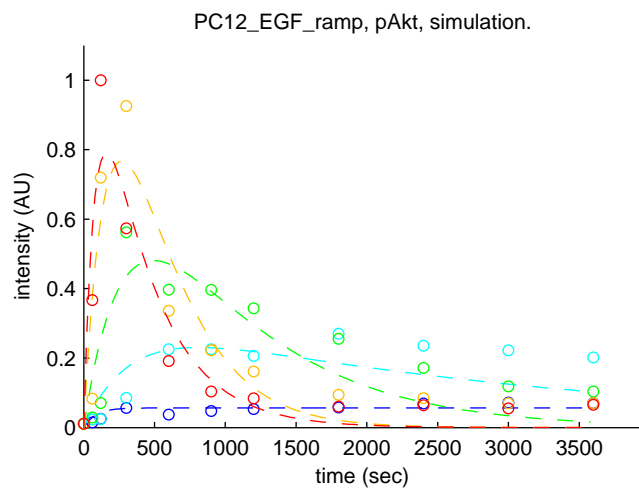
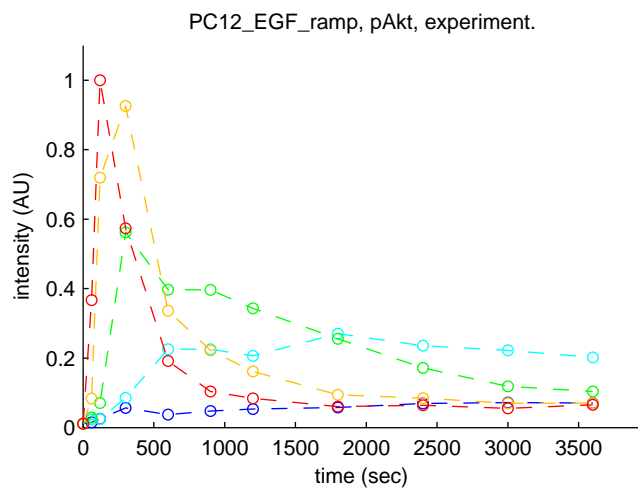
PC12_EGF_ramp, pAkt, $t_{1/2}$ 

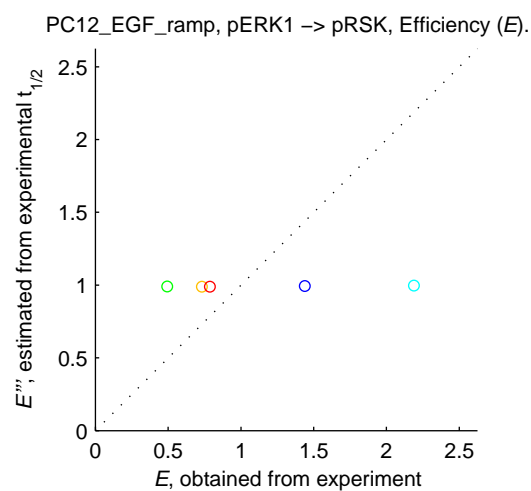
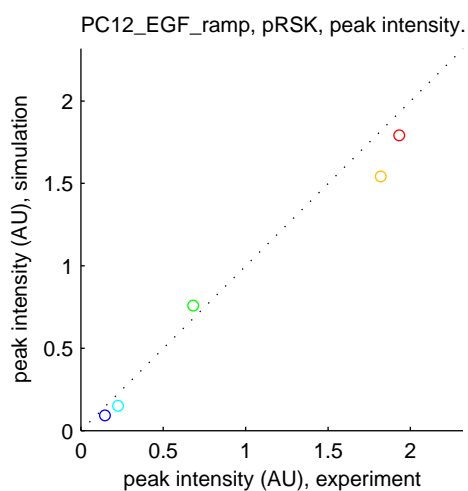
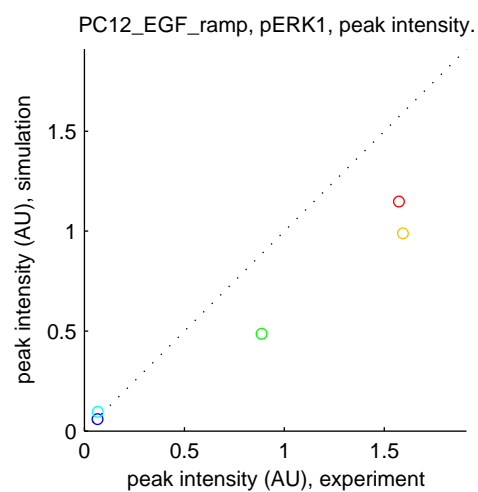
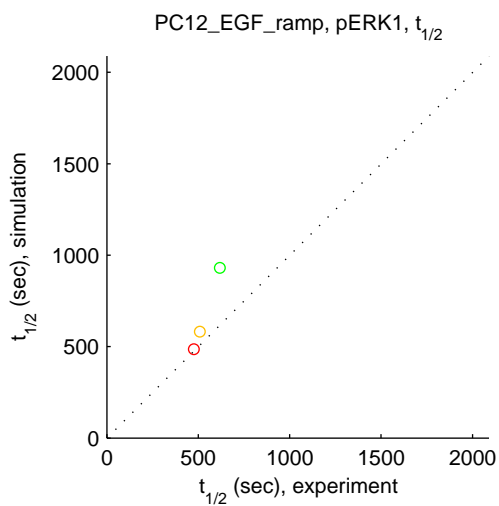
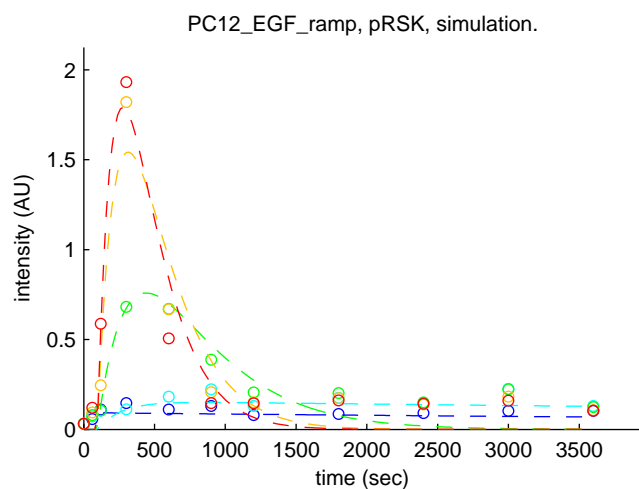
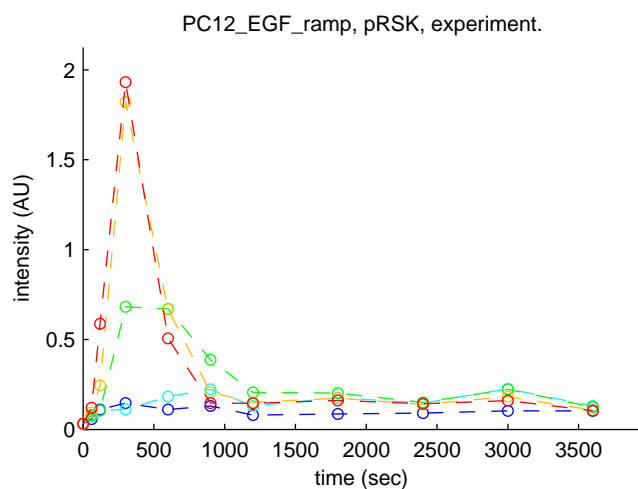
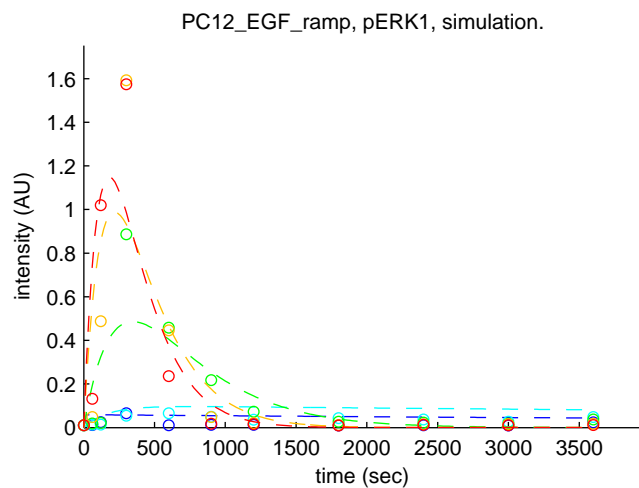
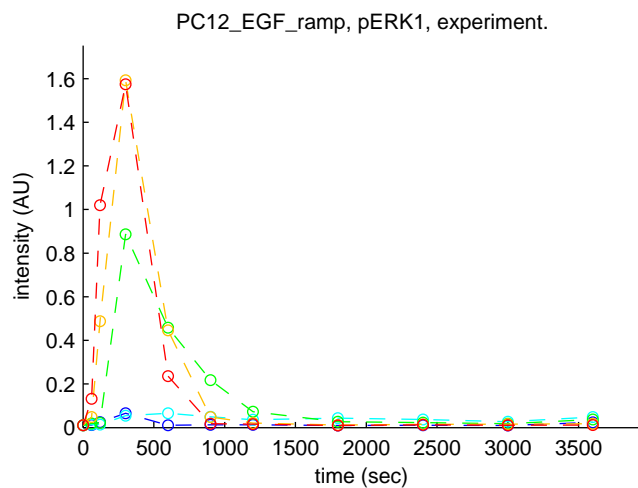
PC12_EGF_ramp, pAkt, peak intensity.

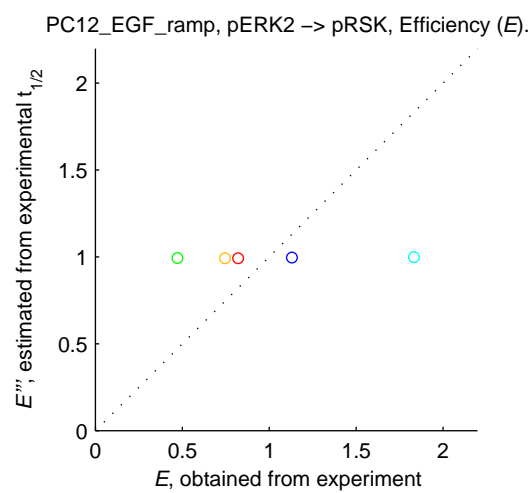
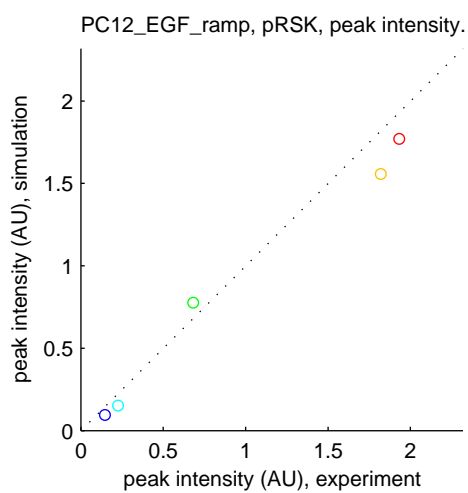
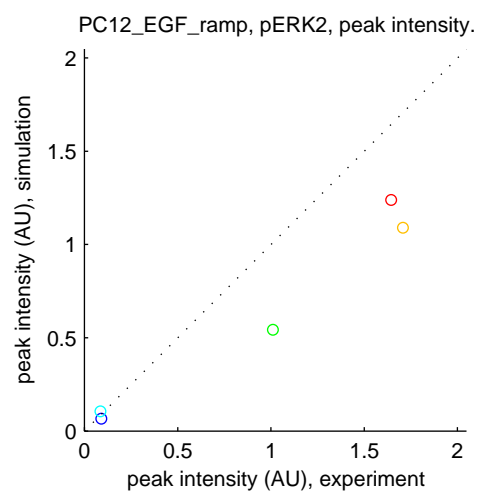
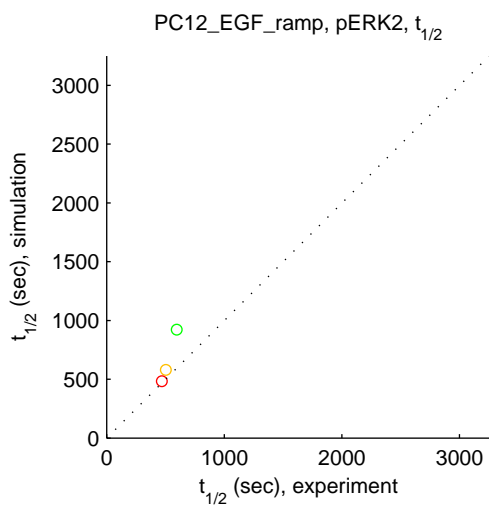
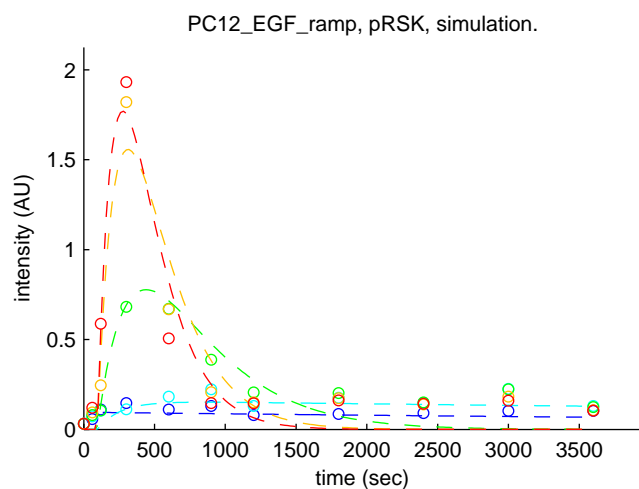
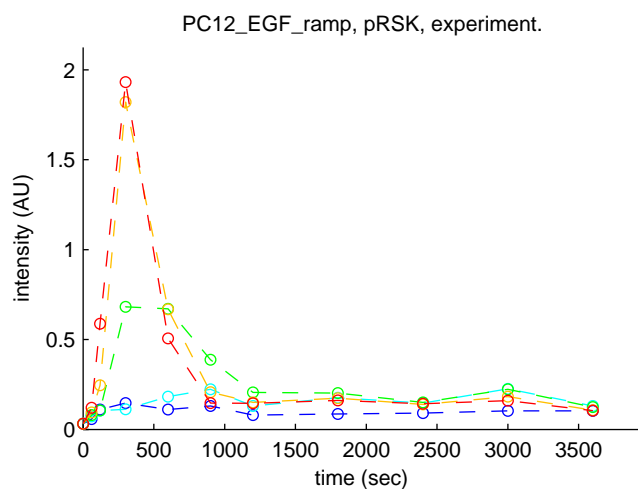
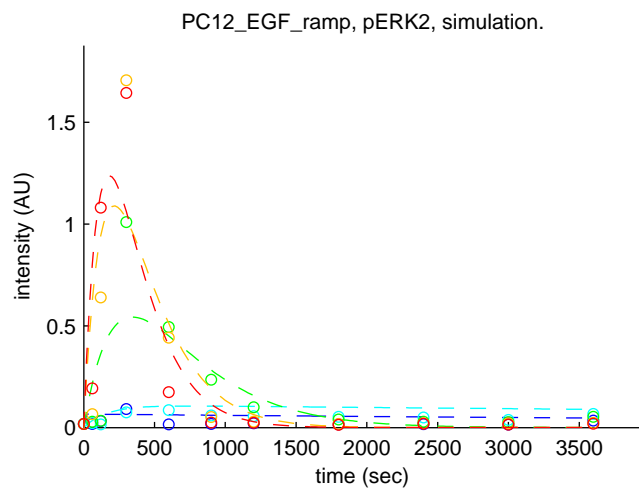
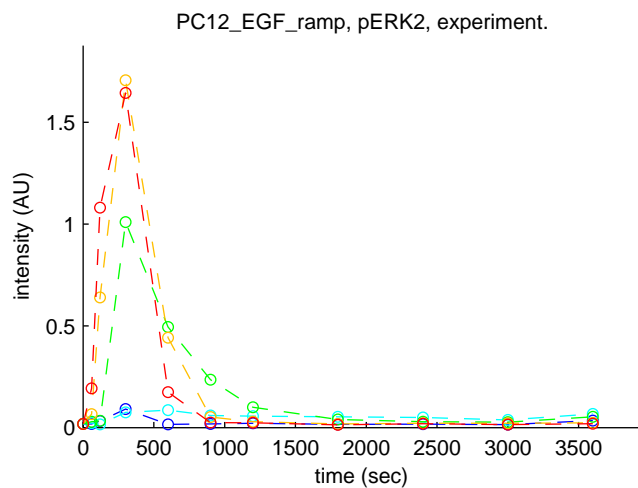


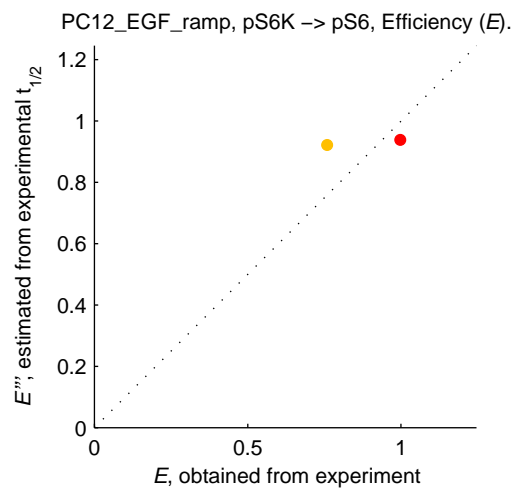
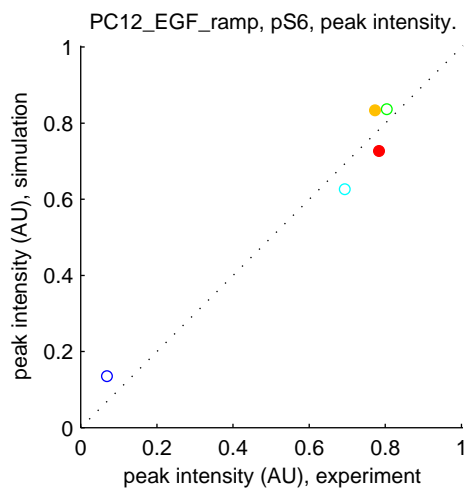
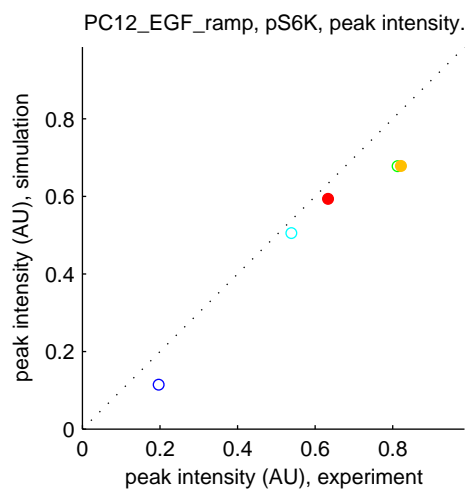
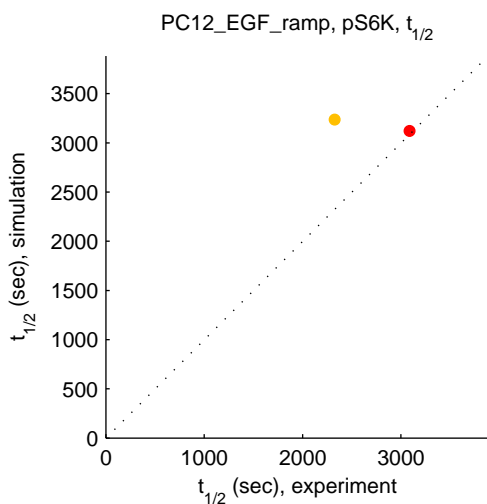
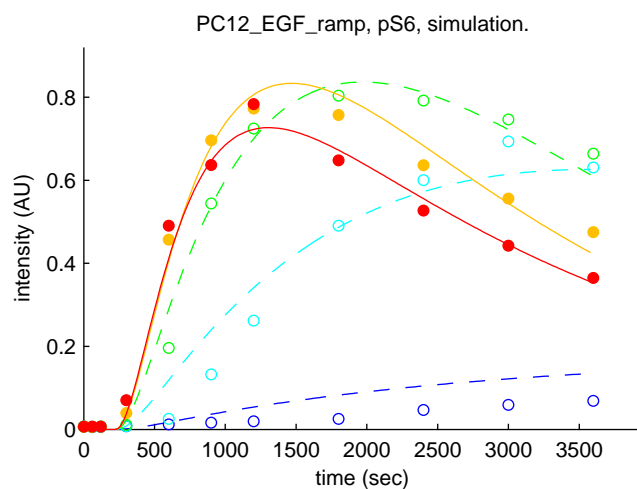
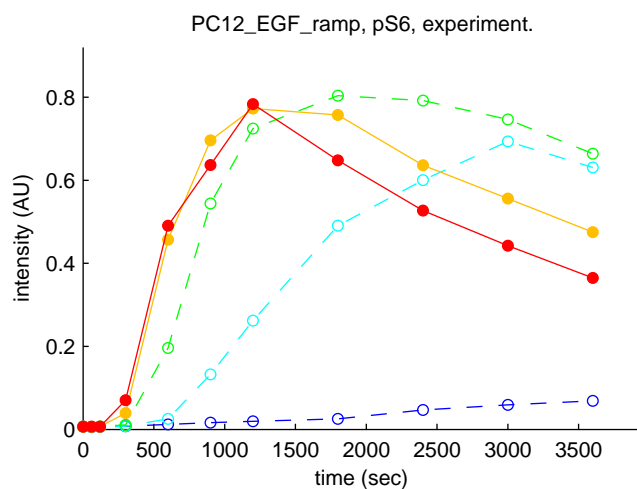
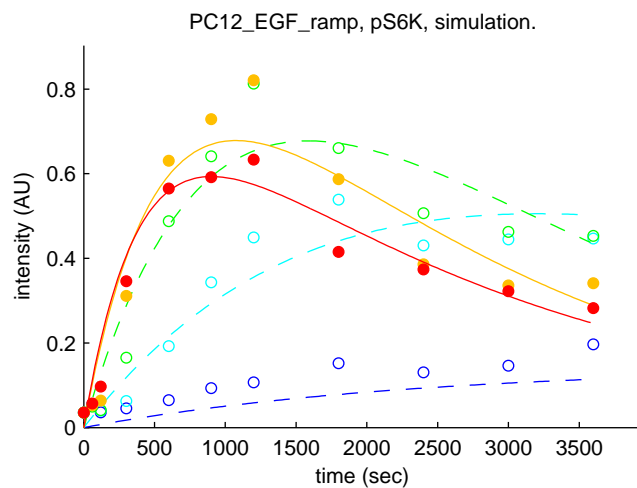
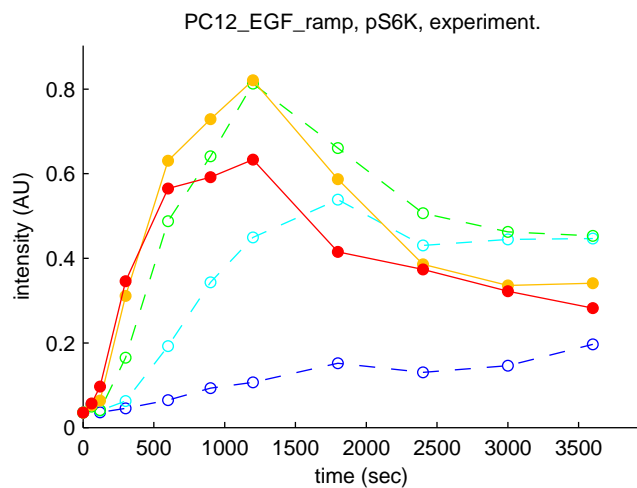
PC12_EGF_ramp, pS6, peak intensity.

PC12_EGF_ramp, pAkt \rightarrow pS6, Efficiency (E).

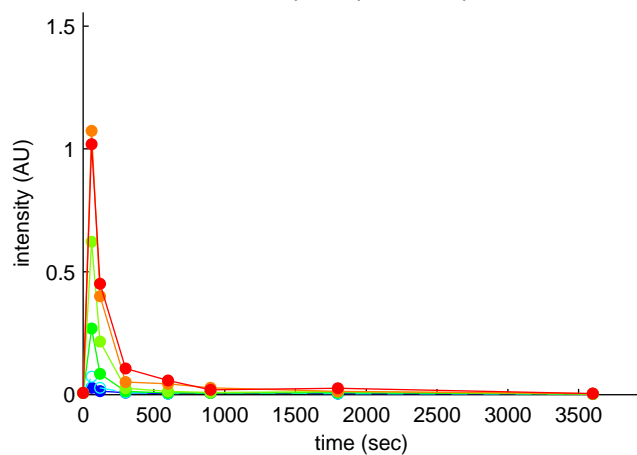




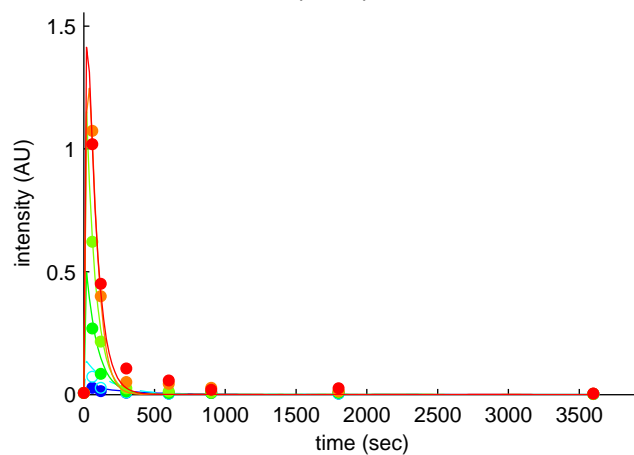




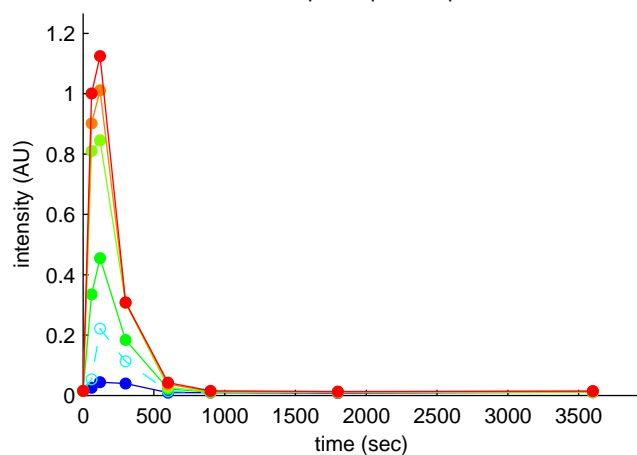
PC12_EGF_pulse, pEGFR, experiment.



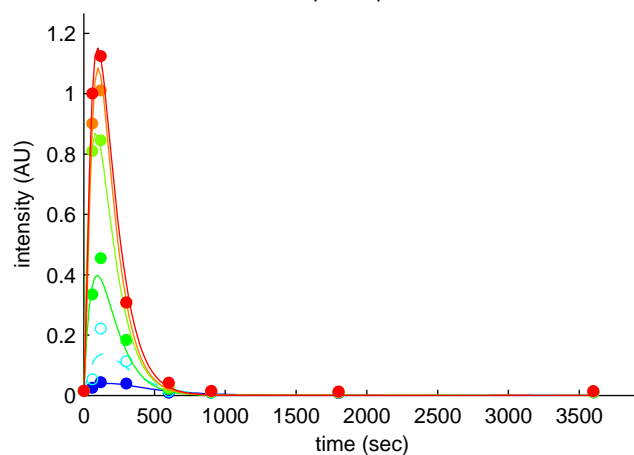
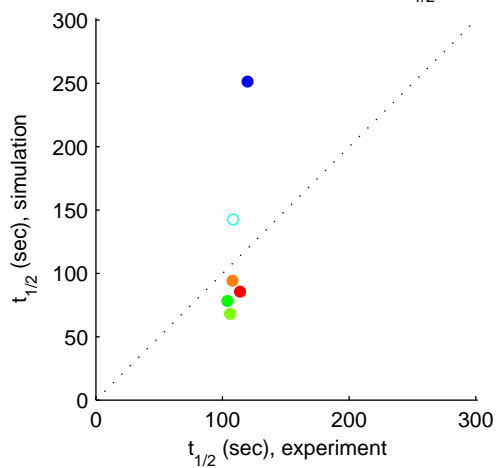
PC12_EGF_pulse, pEGFR, simulation.



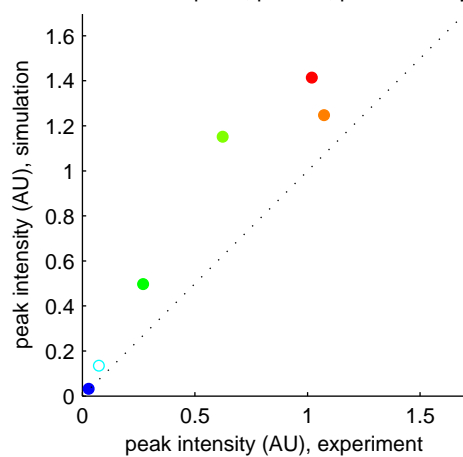
PC12_EGF_pulse, pAkt, experiment.



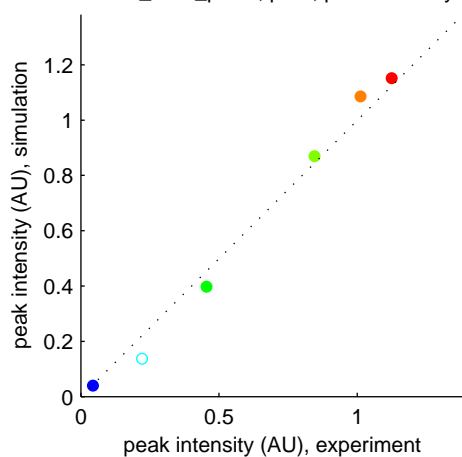
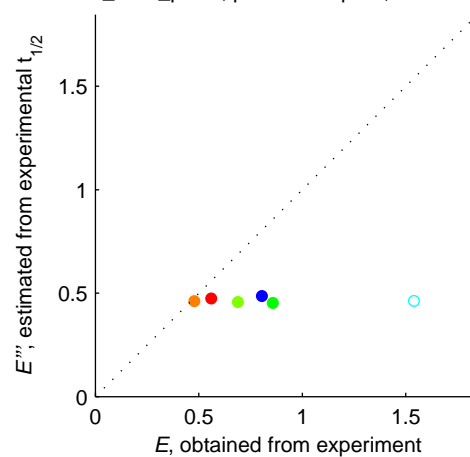
PC12_EGF_pulse, pAkt, simulation.

PC12_EGF_pulse, pEGFR, $t_{1/2}$ 

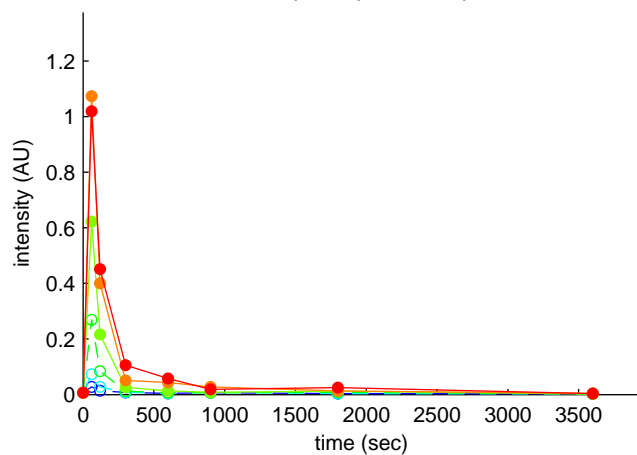
PC12_EGF_pulse, pEGFR, peak intensity.



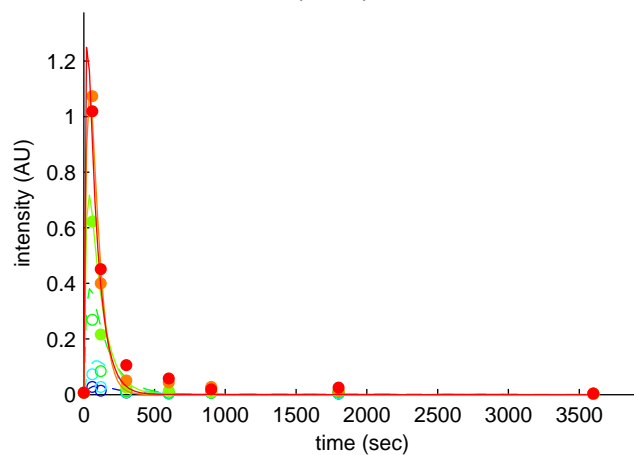
PC12_EGF_pulse, pAkt, peak intensity.

PC12_EGF_pulse, pEGFR \rightarrow pAkt, Efficiency (E).

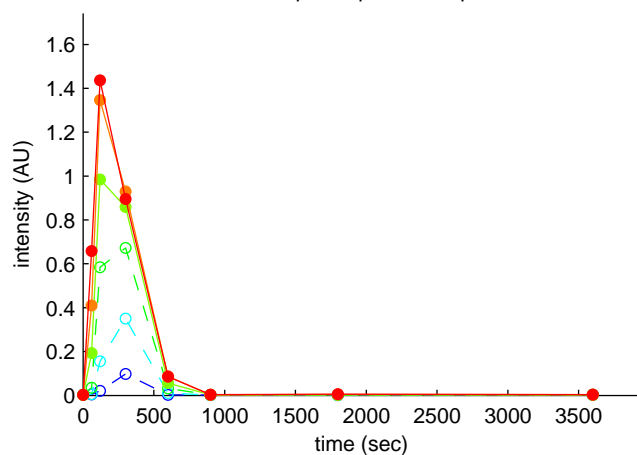
PC12_EGF_pulse, pEGFR, experiment.



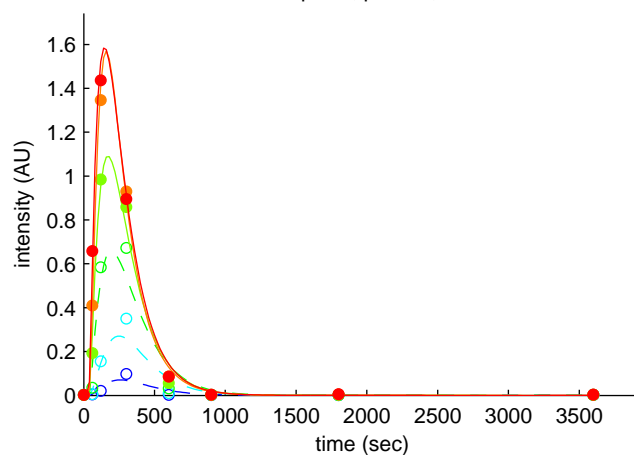
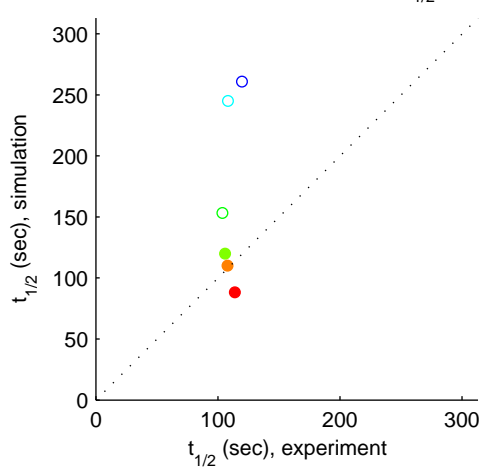
PC12_EGF_pulse, pEGFR, simulation.



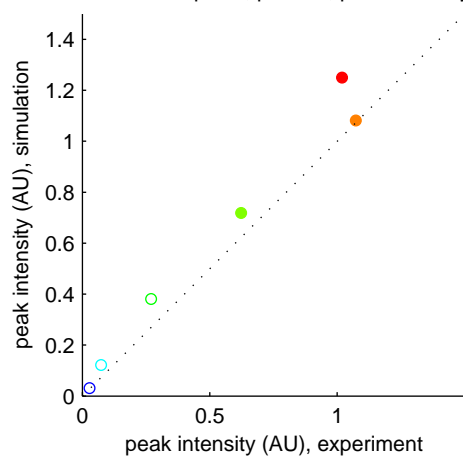
PC12_EGF_pulse, pERK1, experiment.



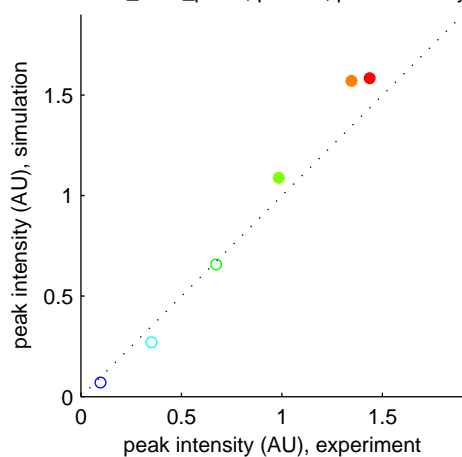
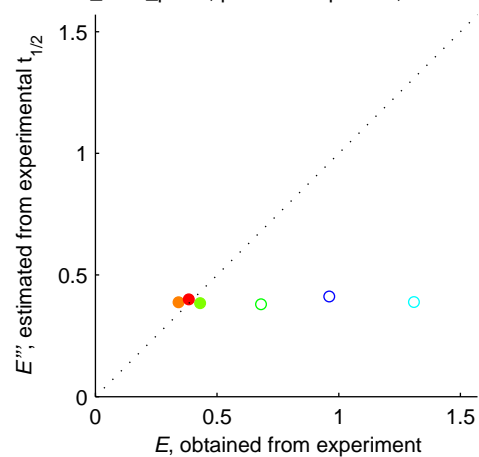
PC12_EGF_pulse, pERK1, simulation.

PC12_EGF_pulse, pEGFR, $t_{1/2}$ 

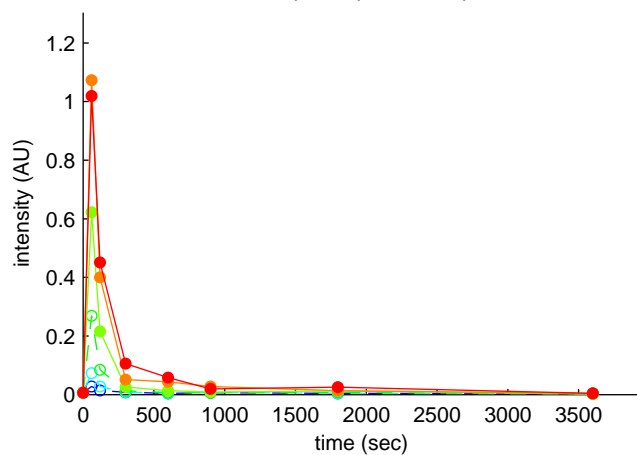
PC12_EGF_pulse, pEGFR, peak intensity.



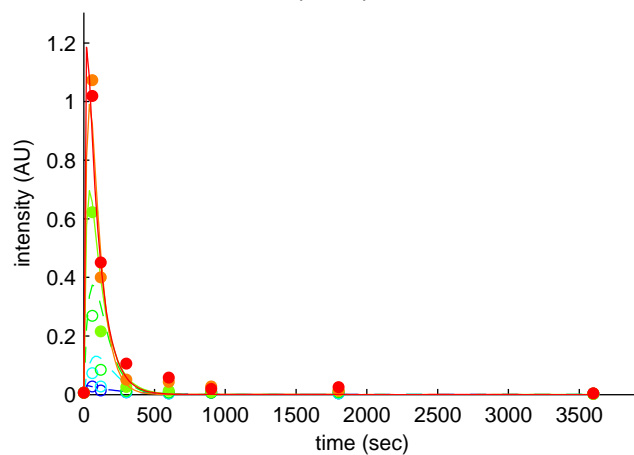
PC12_EGF_pulse, pERK1, peak intensity.

PC12_EGF_pulse, pEGFR \rightarrow pERK1, Efficiency (E).

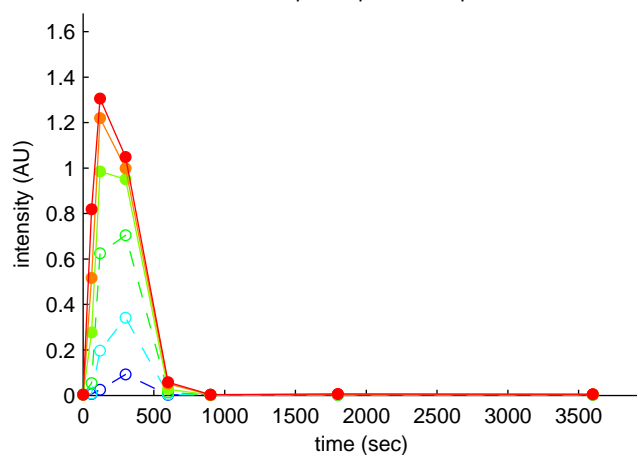
PC12_EGF_pulse, pEGFR, experiment.



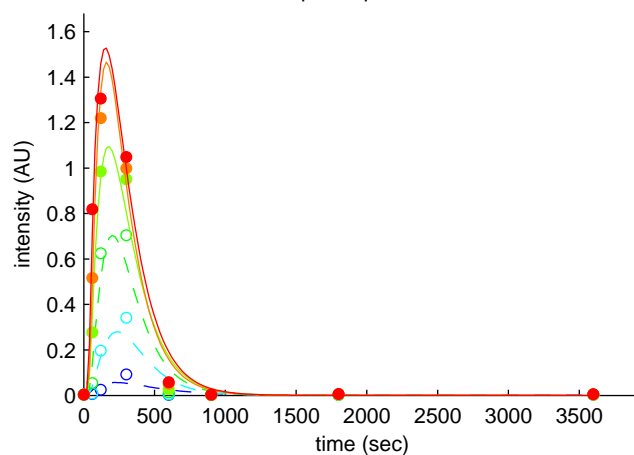
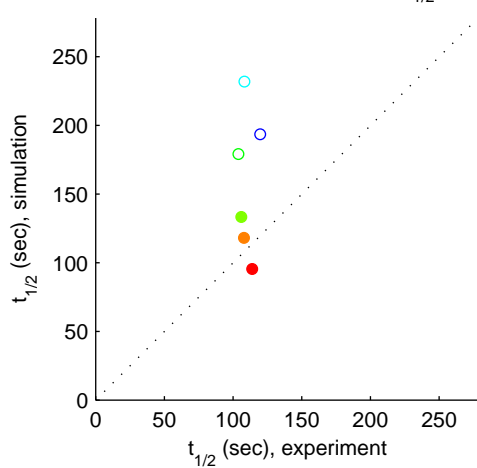
PC12_EGF_pulse, pEGFR, simulation.



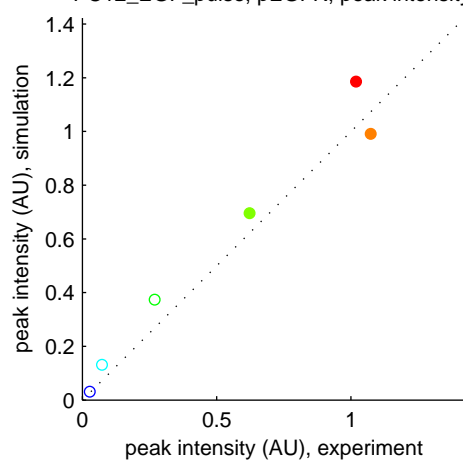
PC12_EGF_pulse, pERK2, experiment.



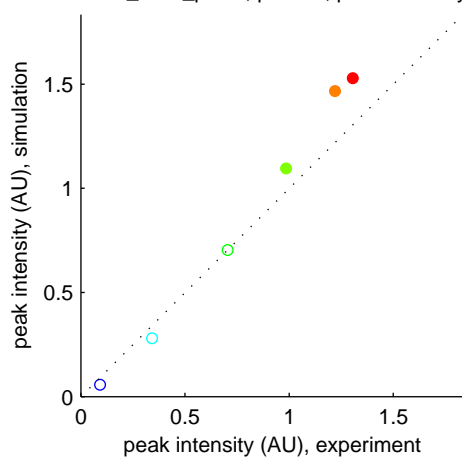
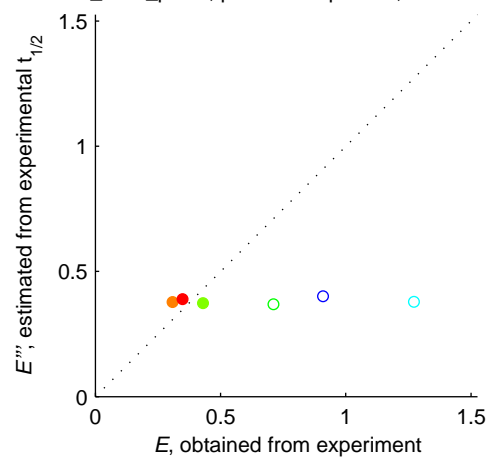
PC12_EGF_pulse, pERK2, simulation.

PC12_EGF_pulse, pEGFR, $t_{1/2}$ 

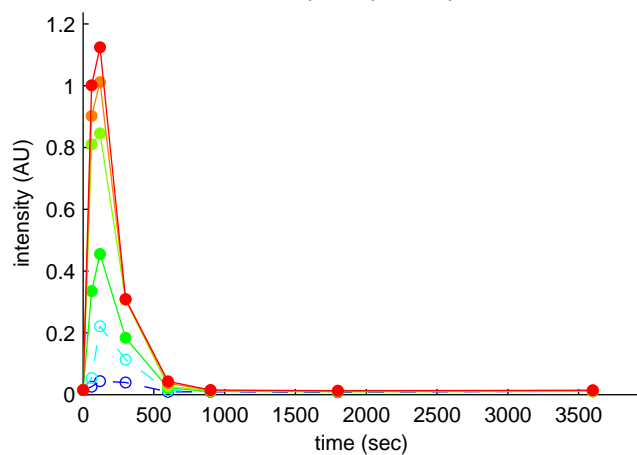
PC12_EGF_pulse, pEGFR, peak intensity.



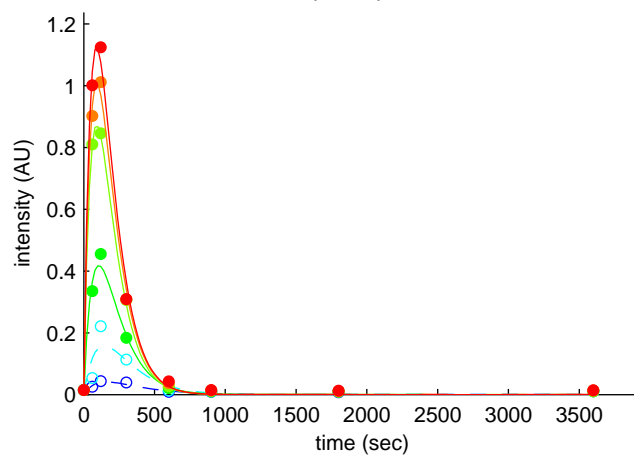
PC12_EGF_pulse, pERK2, peak intensity.

PC12_EGF_pulse, pEGFR \rightarrow pERK2, Efficiency (E).

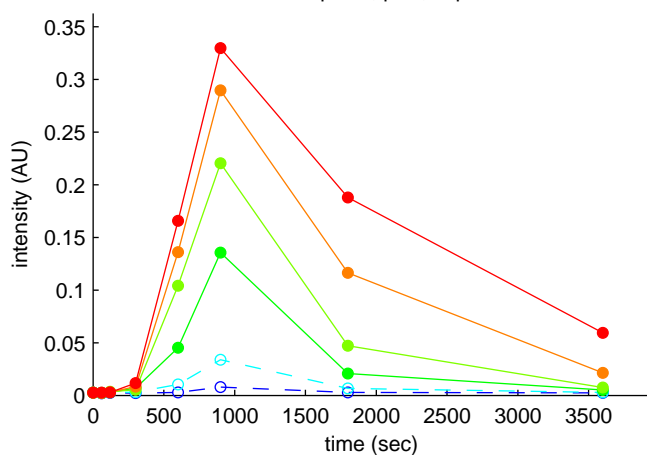
PC12_EGF_pulse, pAkt, experiment.



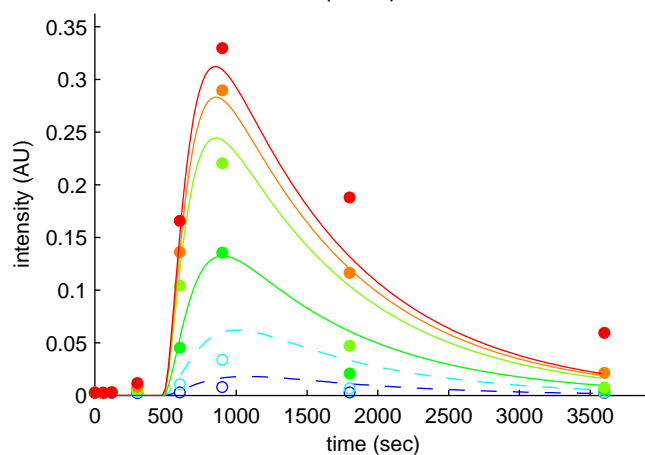
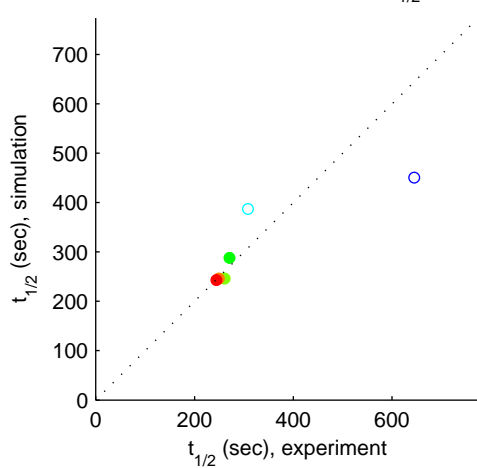
PC12_EGF_pulse, pAkt, simulation.



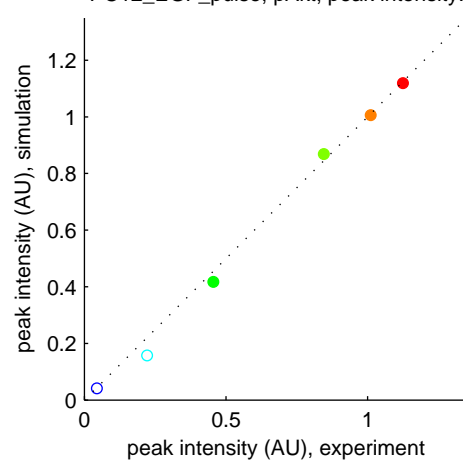
PC12_EGF_pulse, pS6, experiment.



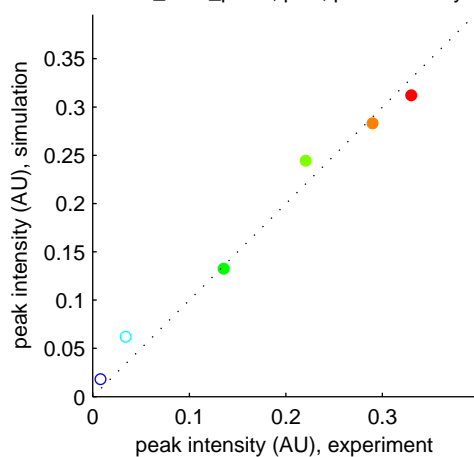
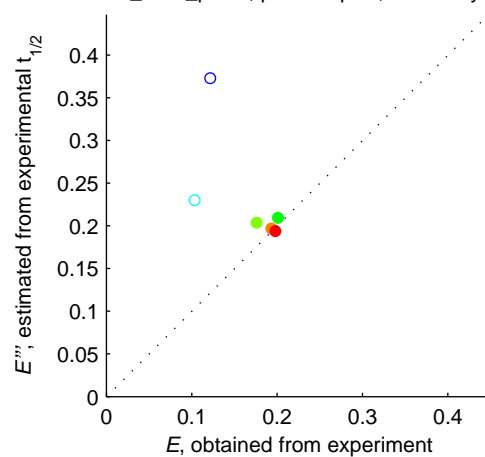
PC12_EGF_pulse, pS6, simulation.

PC12_EGF_pulse, pAkt, $t_{1/2}$ 

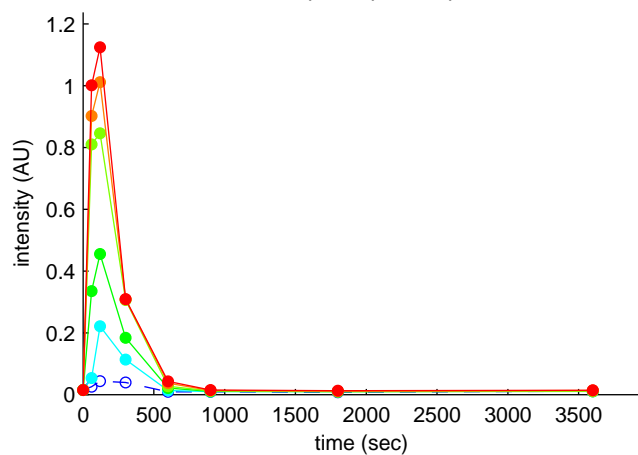
PC12_EGF_pulse, pAkt, peak intensity.



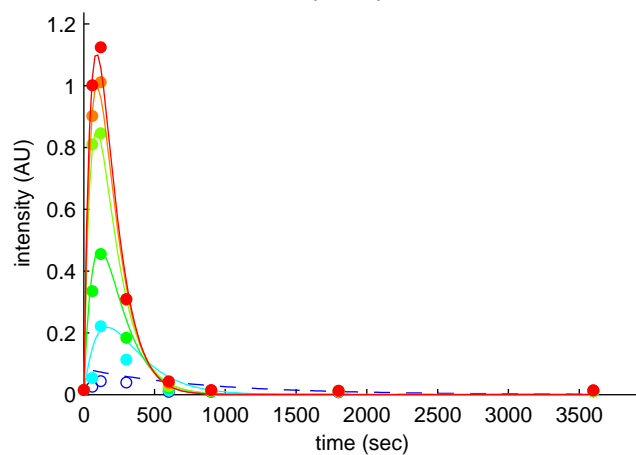
PC12_EGF_pulse, pS6, peak intensity.

PC12_EGF_pulse, pAkt \rightarrow pS6, Efficiency (E).

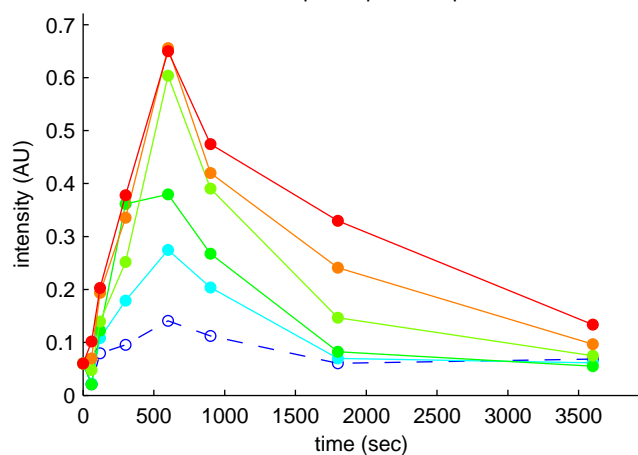
PC12_EGF_pulse, pAkt, experiment.



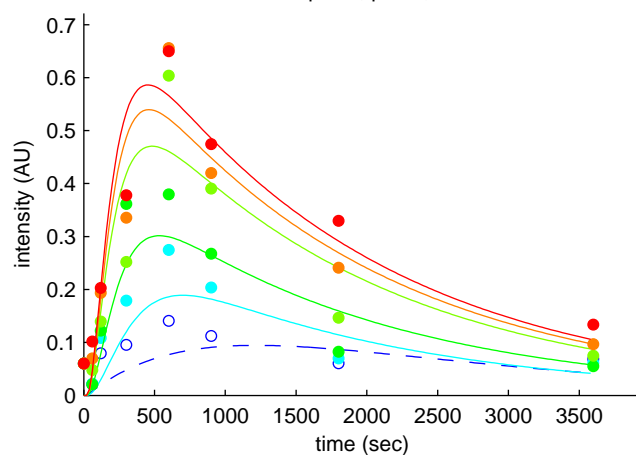
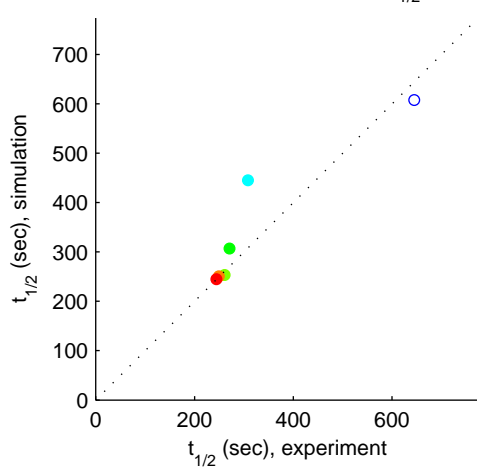
PC12_EGF_pulse, pAkt, simulation.



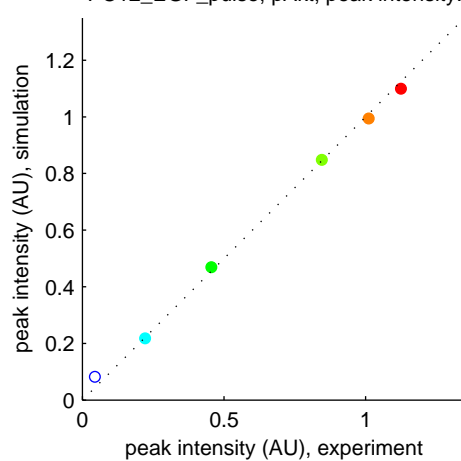
PC12_EGF_pulse, pS6K, experiment.



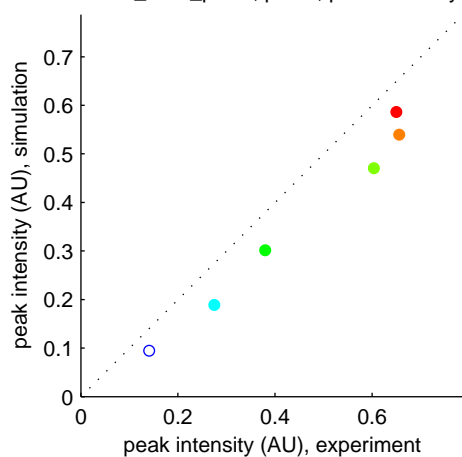
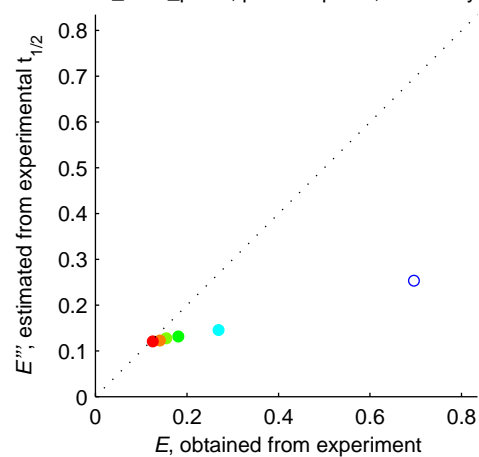
PC12_EGF_pulse, pS6K, simulation.

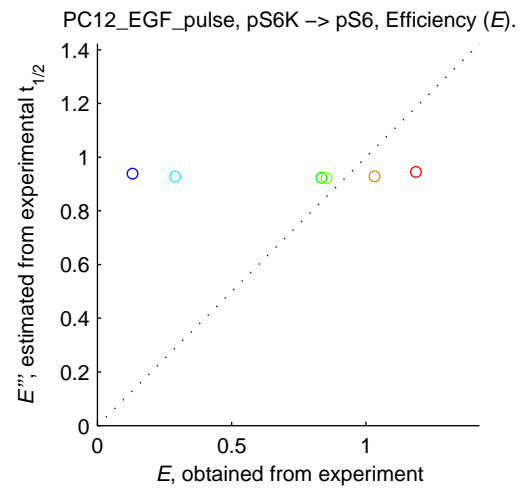
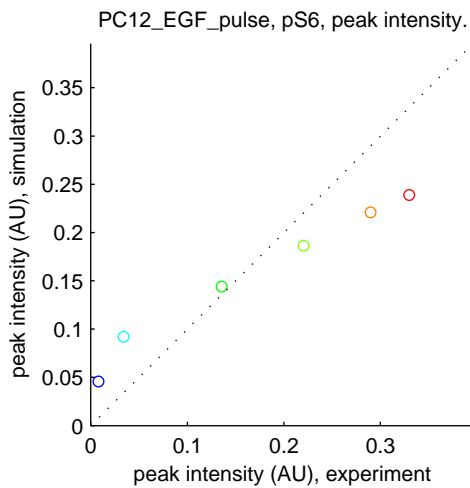
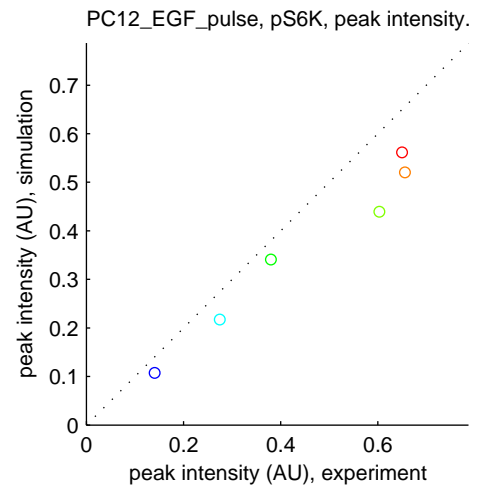
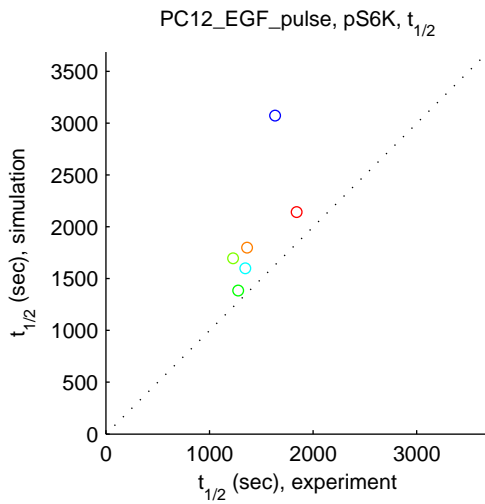
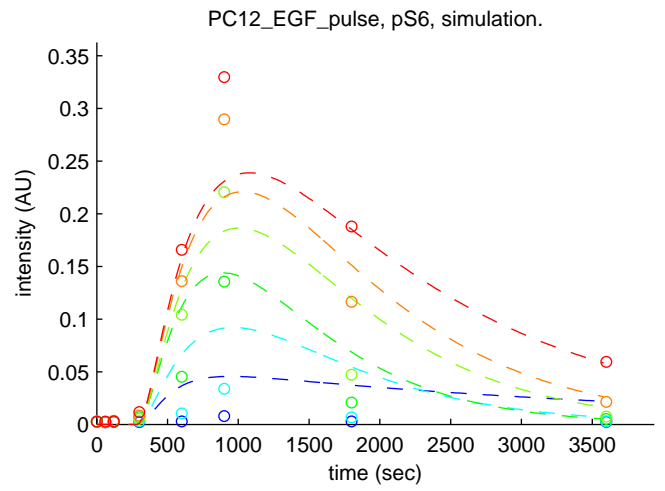
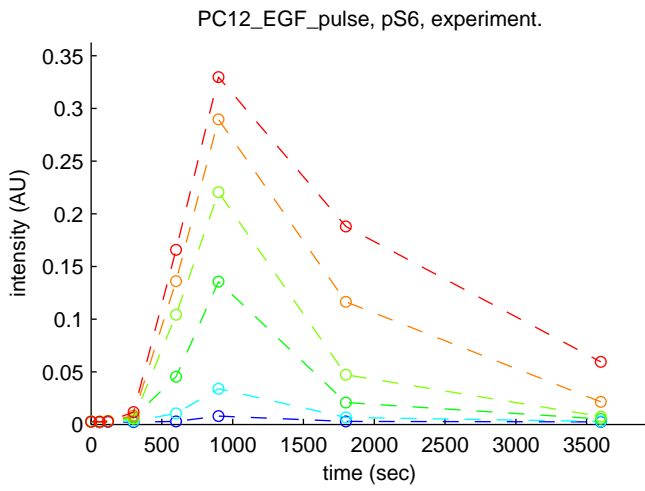
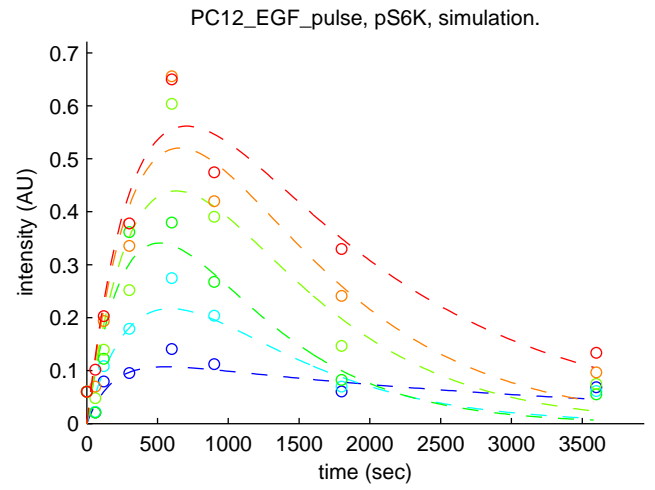
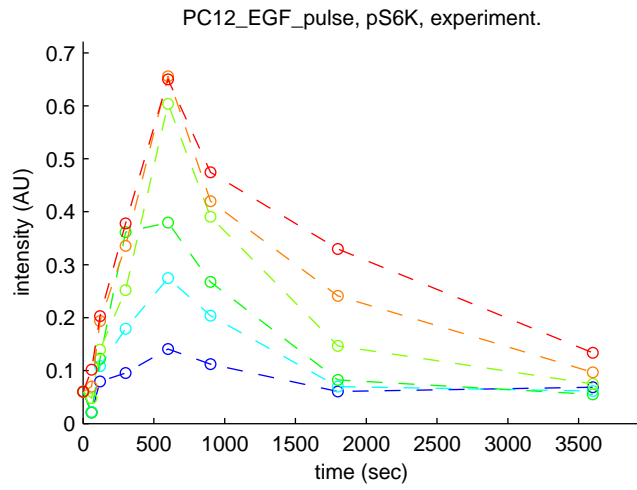
PC12_EGF_pulse, pAkt, $t_{1/2}$ 

PC12_EGF_pulse, pAkt, peak intensity.

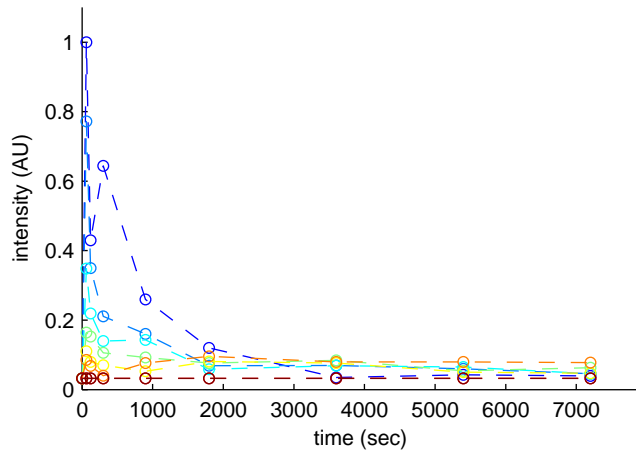


PC12_EGF_pulse, pS6K, peak intensity.

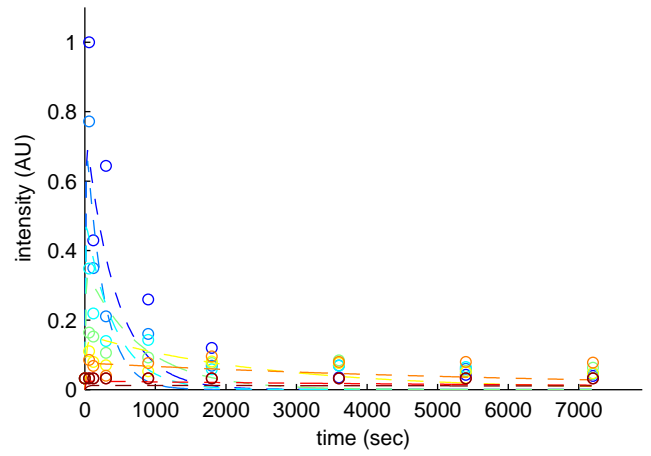
PC12_EGF_pulse, pAkt \rightarrow pS6K, Efficiency (E).



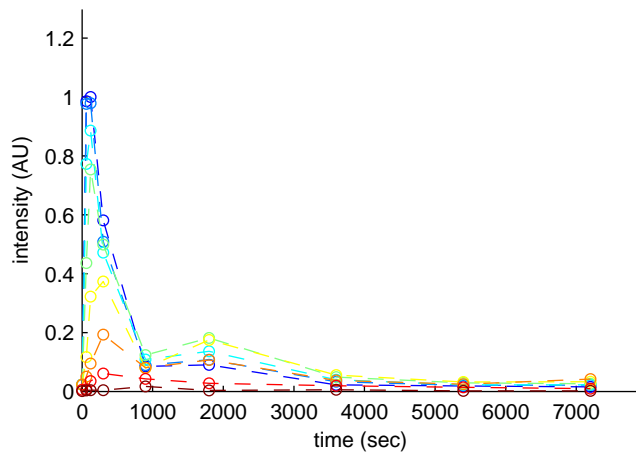
PC12_EGF_inh, pEGFR, experiment.



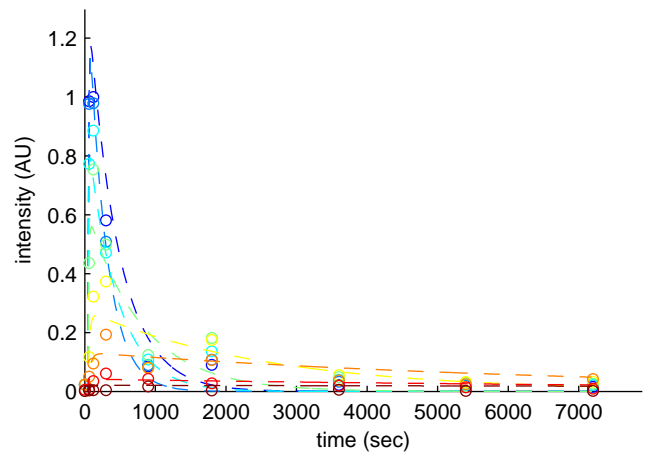
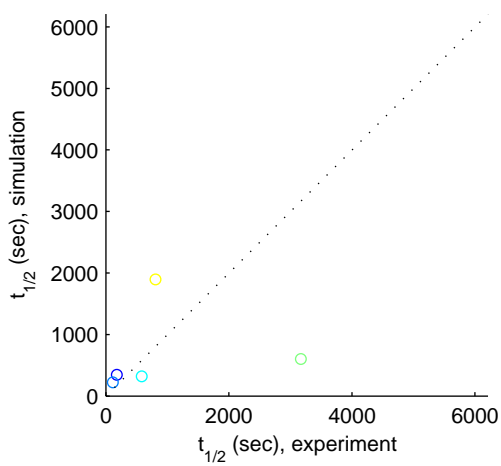
PC12_EGF_inh, pEGFR, simulation.



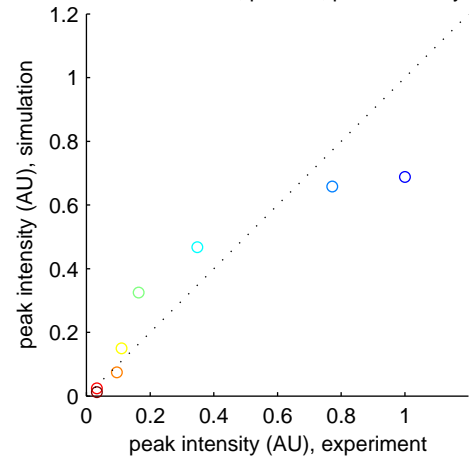
PC12_EGF_inh, pAkt, experiment.



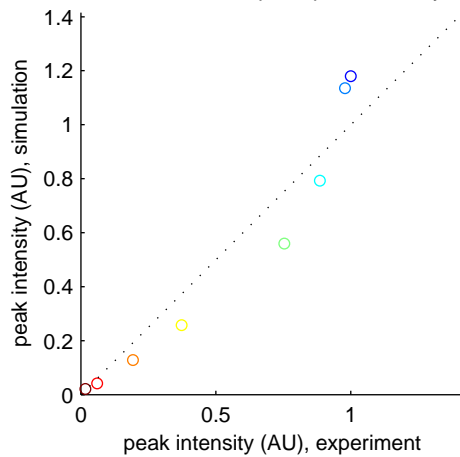
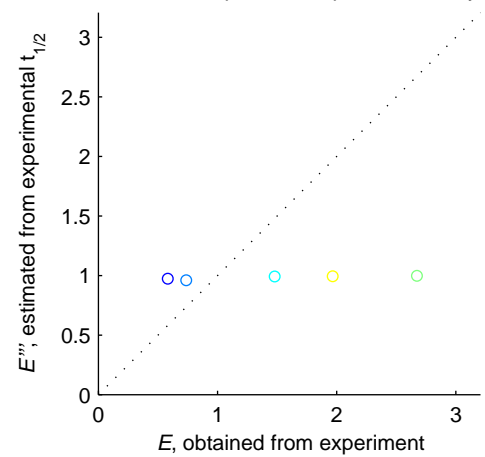
PC12_EGF_inh, pAkt, simulation.

PC12_EGF_inh, pEGFR, $t_{1/2}$ 

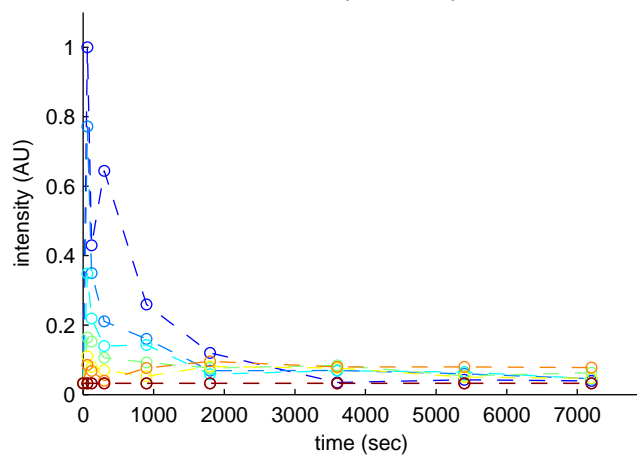
PC12_EGF_inh, pEGFR, peak intensity.



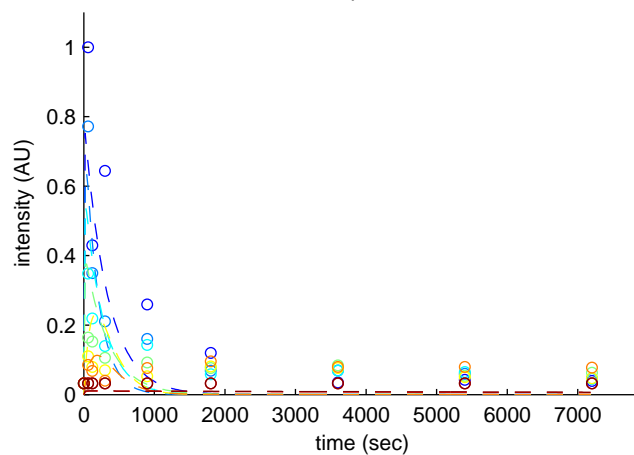
PC12_EGF_inh, pAkt, peak intensity.

PC12_EGF_inh, pEGFR \rightarrow pAkt, Efficiency (E).

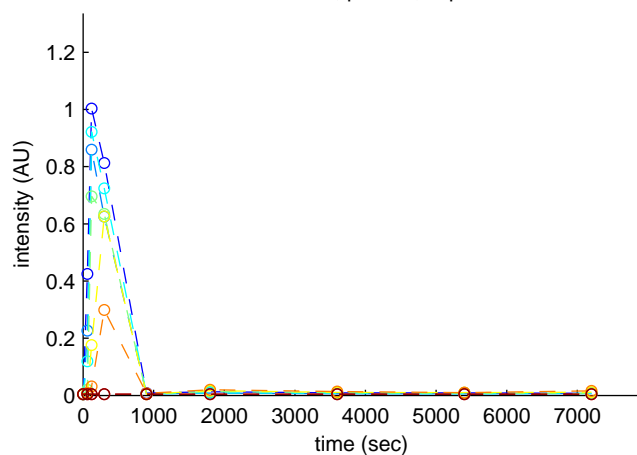
PC12_EGF_inh, pEGFR, experiment.



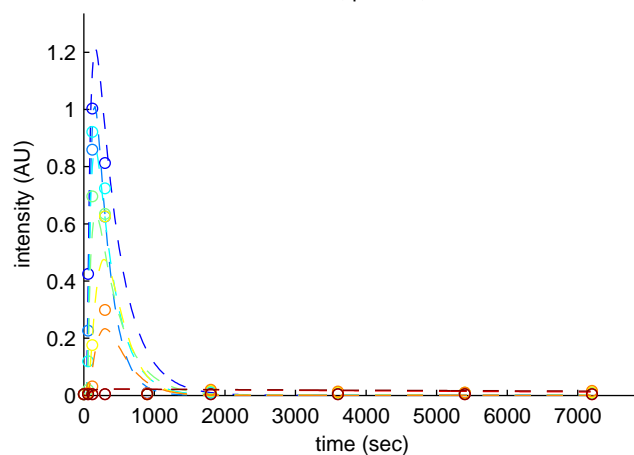
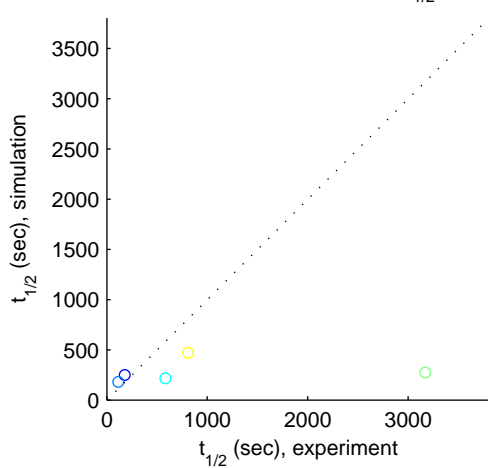
PC12_EGF_inh, pEGFR, simulation.



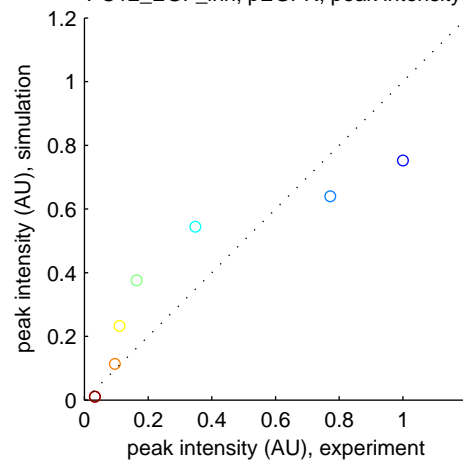
PC12_EGF_inh, pERK1, experiment.



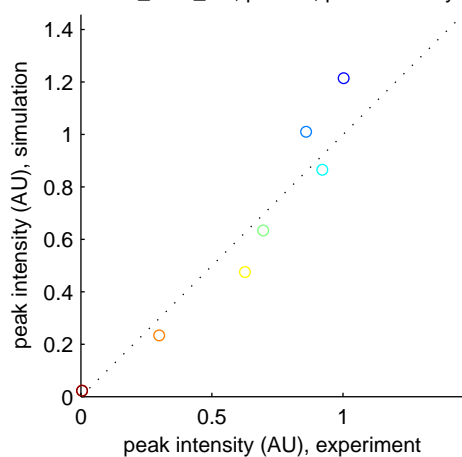
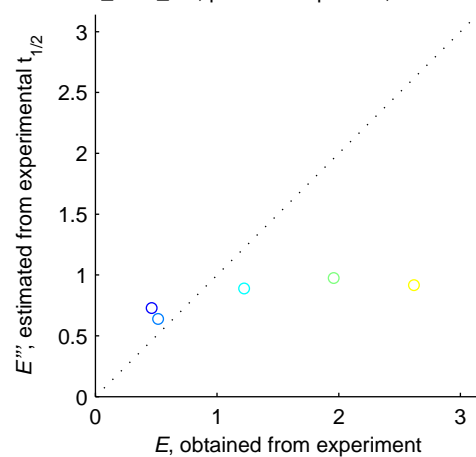
PC12_EGF_inh, pERK1, simulation.

PC12_EGF_inh, pEGFR, $t_{1/2}$ 

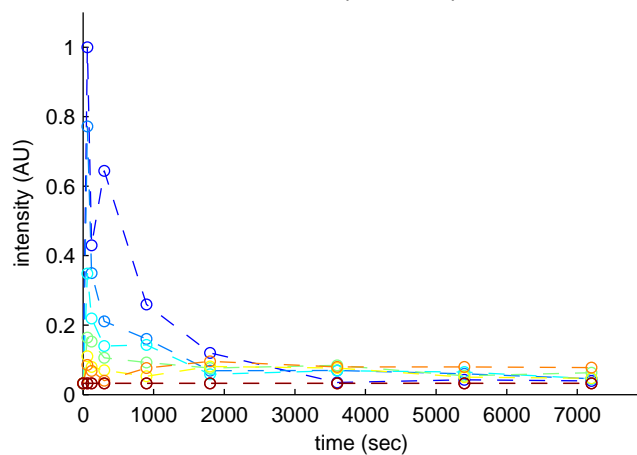
PC12_EGF_inh, pEGFR, peak intensity.



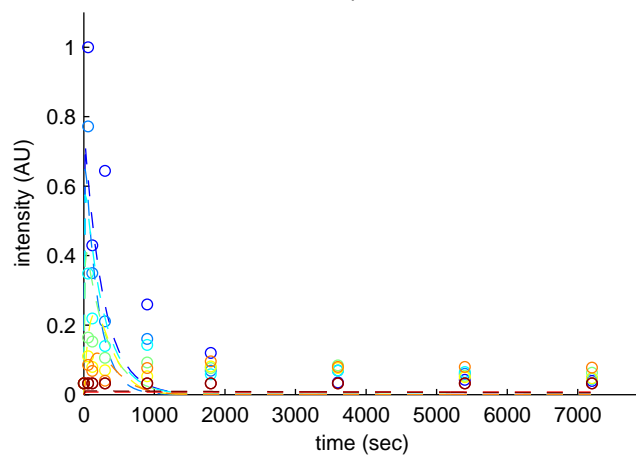
PC12_EGF_inh, pERK1, peak intensity.

PC12_EGF_inh, pEGFR \rightarrow pERK1, Efficiency (E).

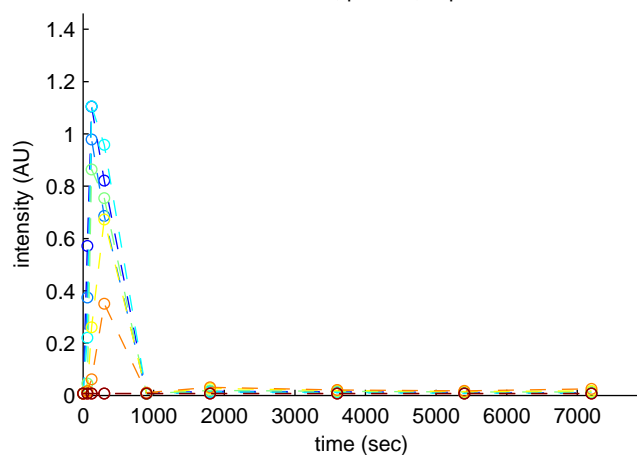
PC12_EGF_inh, pEGFR, experiment.



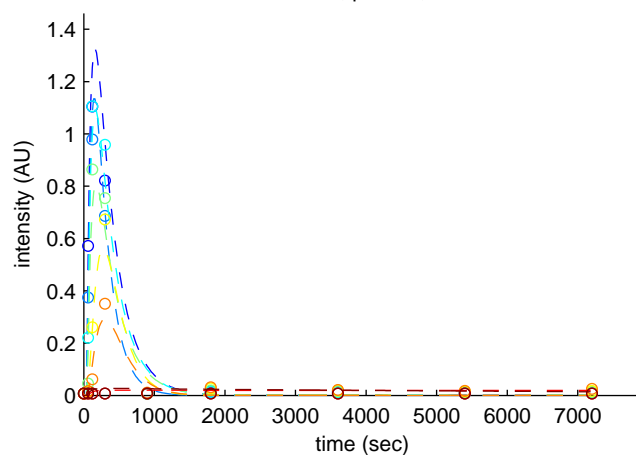
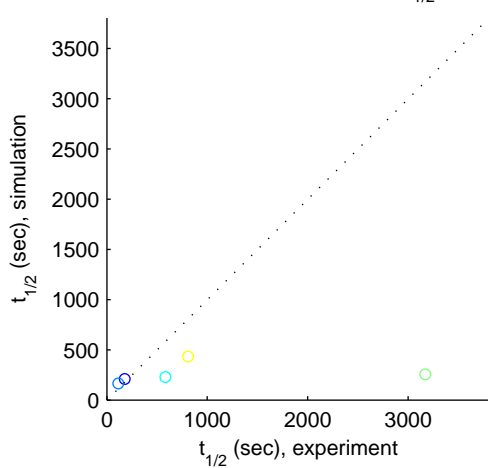
PC12_EGF_inh, pEGFR, simulation.



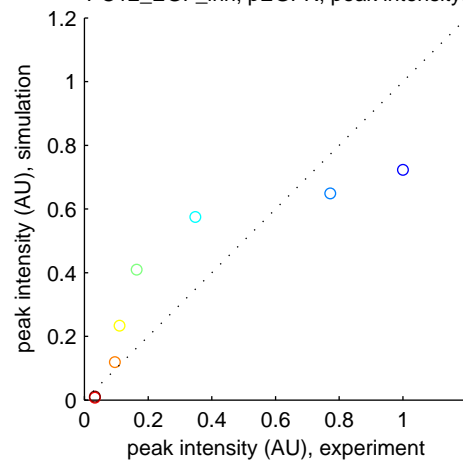
PC12_EGF_inh, pERK2, experiment.



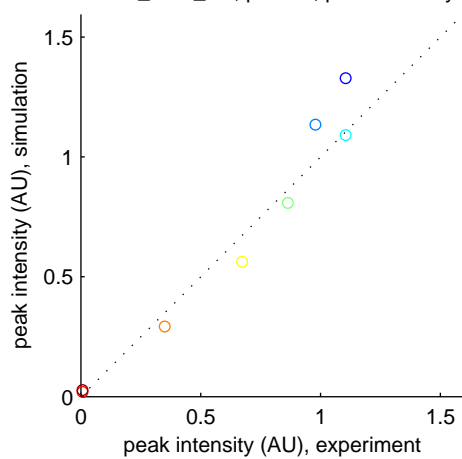
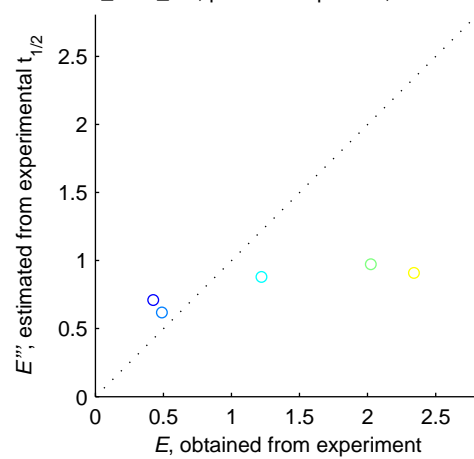
PC12_EGF_inh, pERK2, simulation.

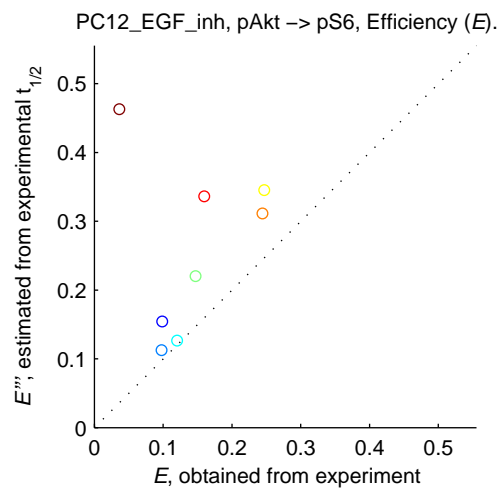
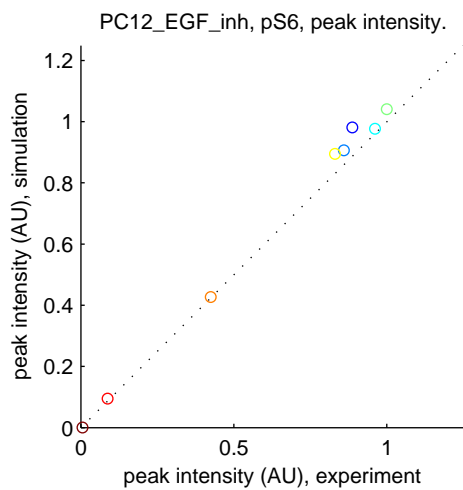
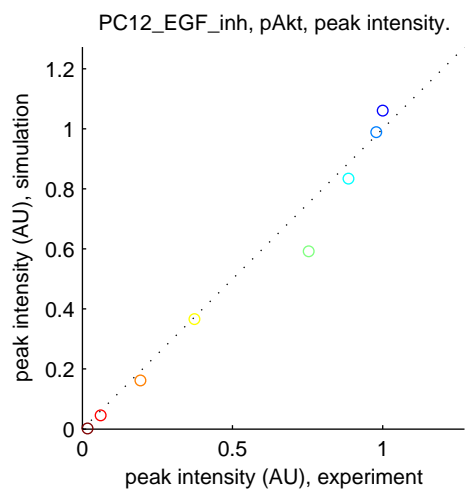
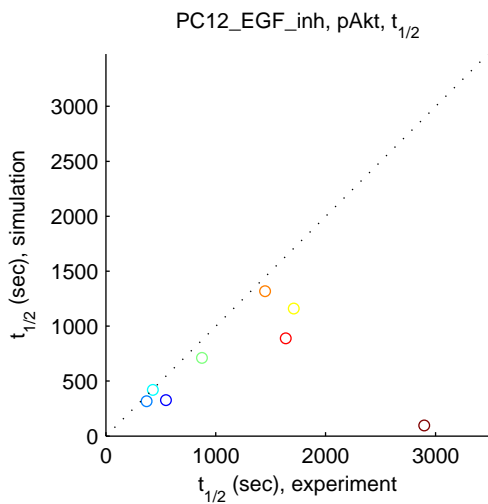
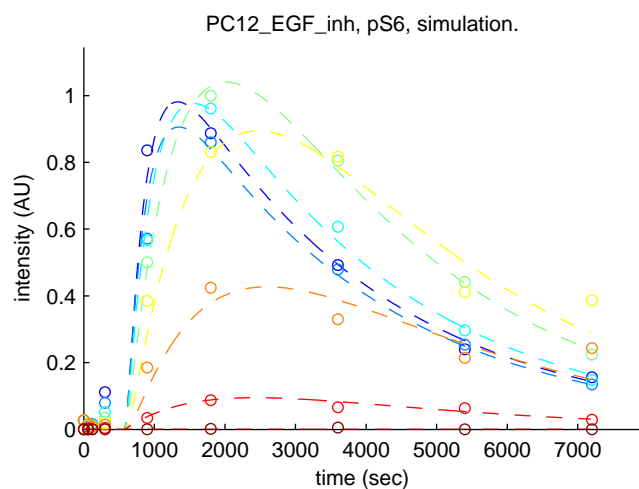
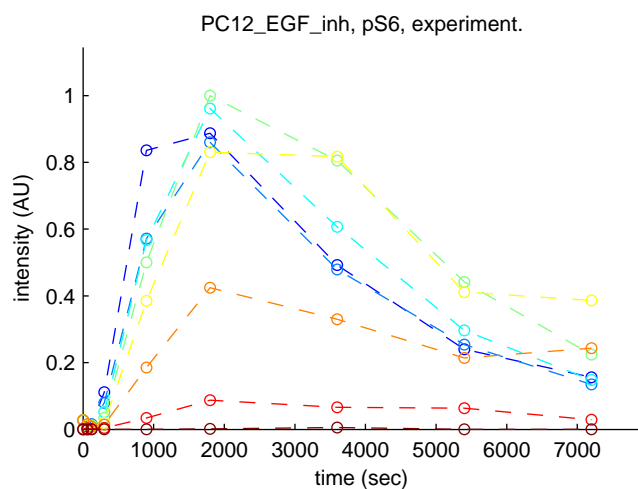
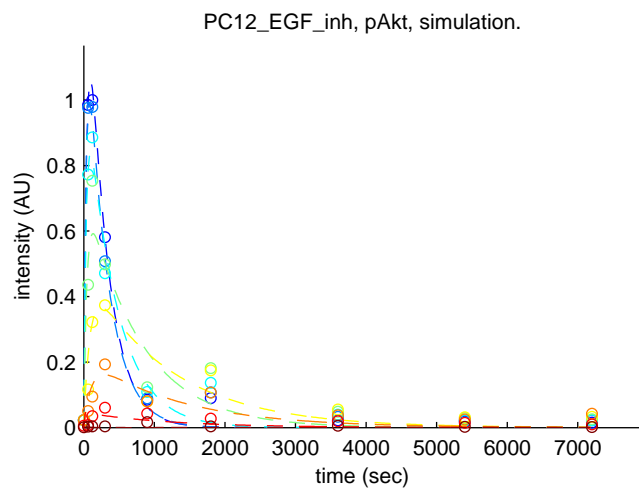
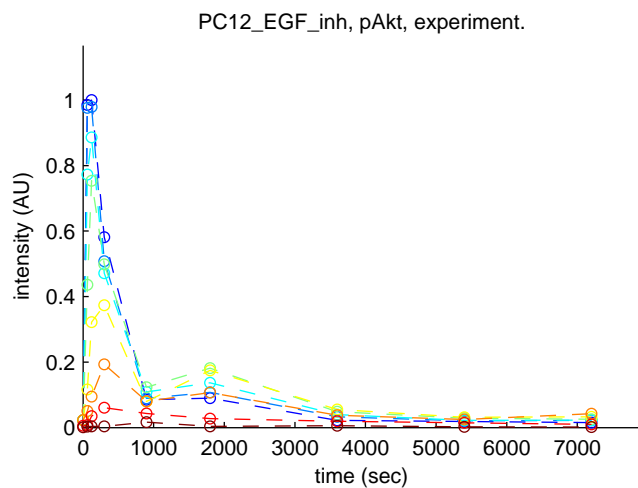
PC12_EGF_inh, pEGFR, $t_{1/2}$ 

PC12_EGF_inh, pEGFR, peak intensity.

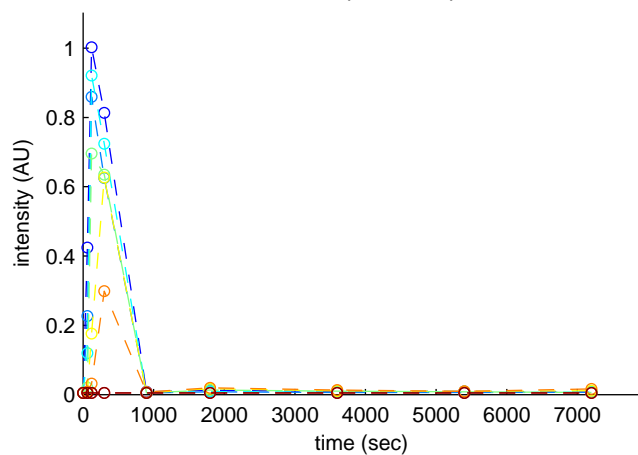


PC12_EGF_inh, pERK2, peak intensity.

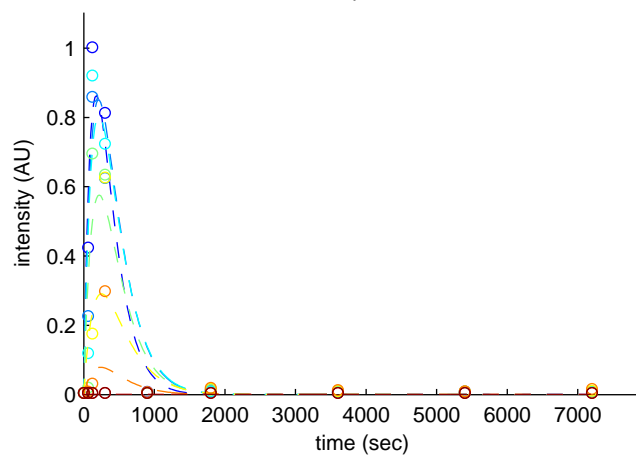
PC12_EGF_inh, pEGFR \rightarrow pERK2, Efficiency (E).



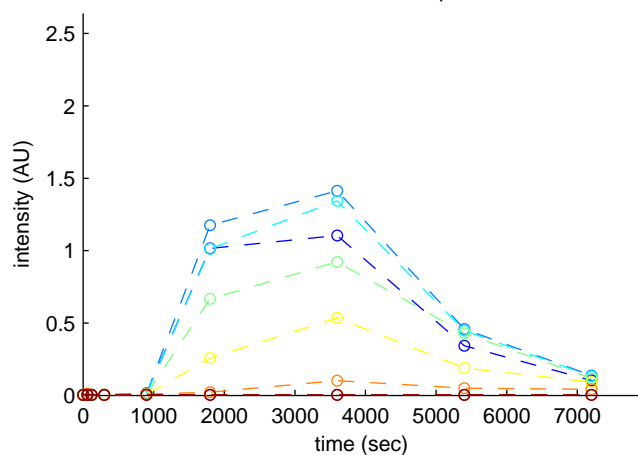
PC12_EGF_inh, pERK1, experiment.



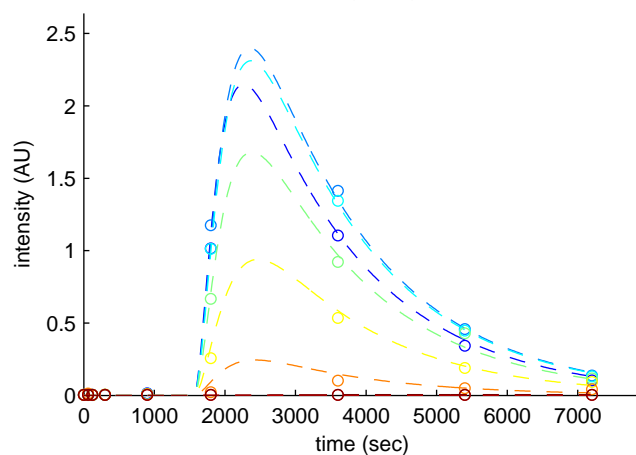
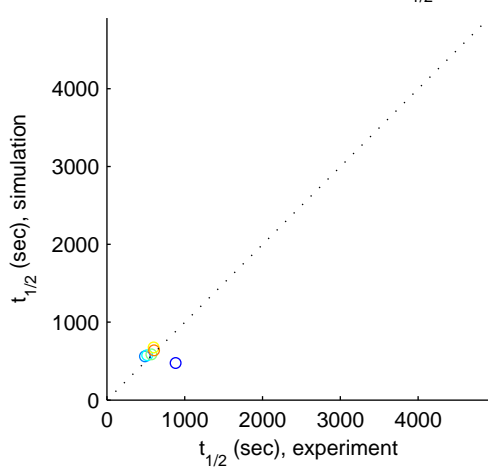
PC12_EGF_inh, pERK1, simulation.



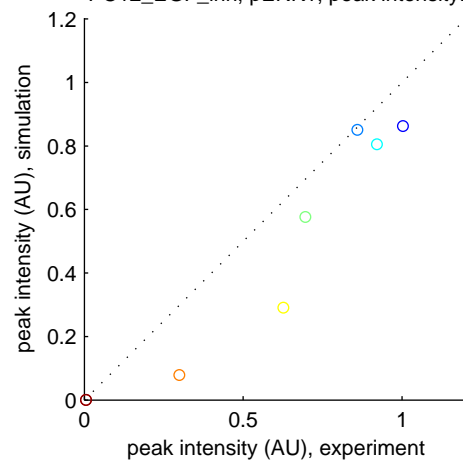
PC12_EGF_inh, cFos, experiment.



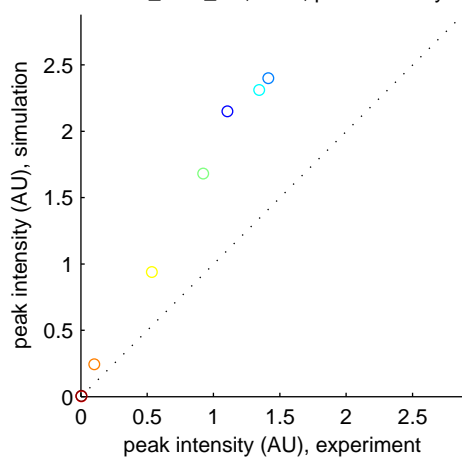
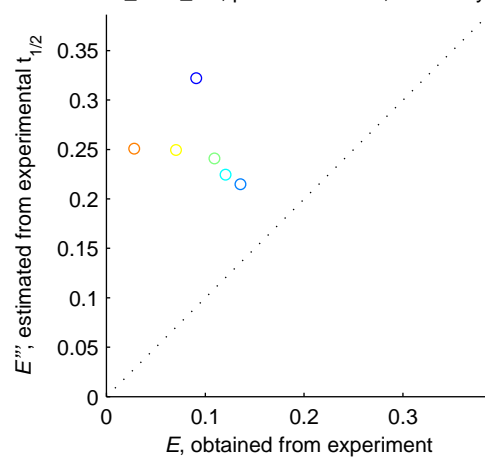
PC12_EGF_inh, cFos, simulation.

PC12_EGF_inh, pERK1, $t_{1/2}$ 

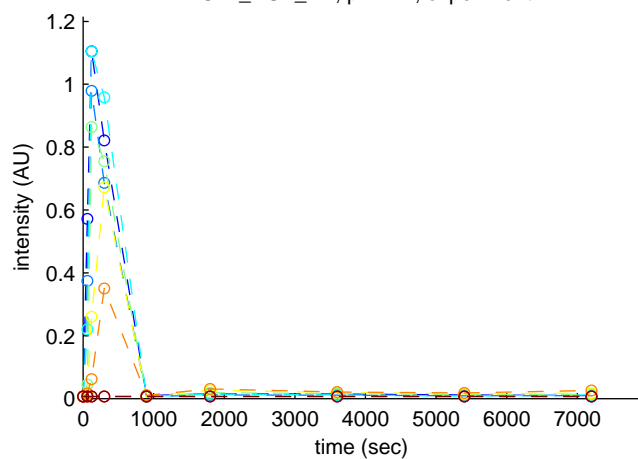
PC12_EGF_inh, pERK1, peak intensity.



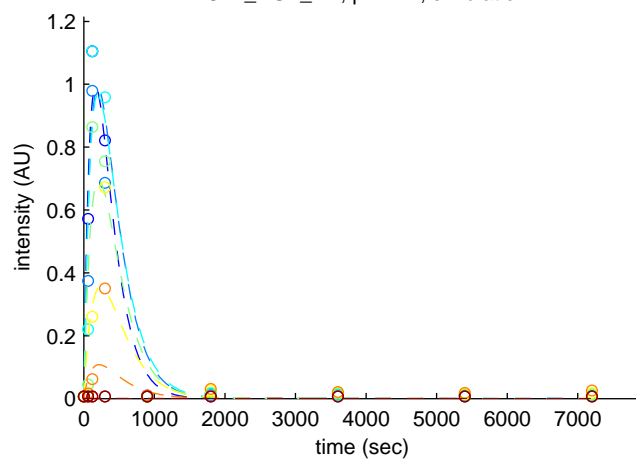
PC12_EGF_inh, cFos, peak intensity.

PC12_EGF_inh, pERK1 \rightarrow cFos, Efficiency (E).

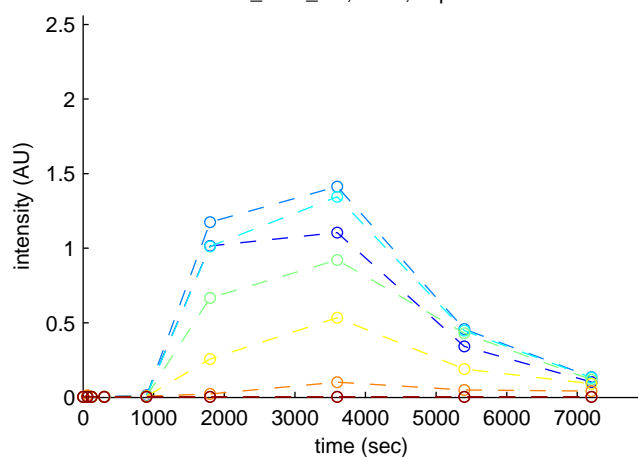
PC12_EGF_inh, pERK2, experiment.



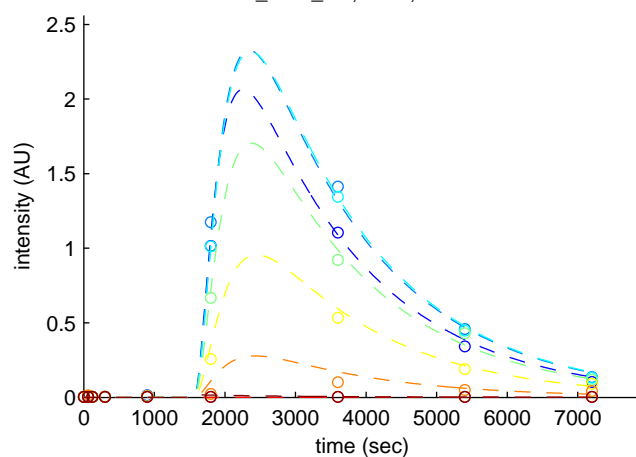
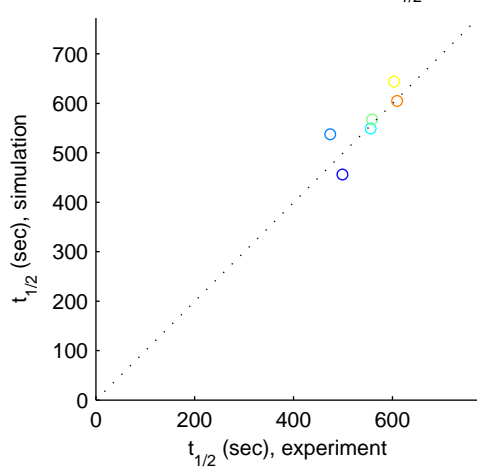
PC12_EGF_inh, pERK2, simulation.



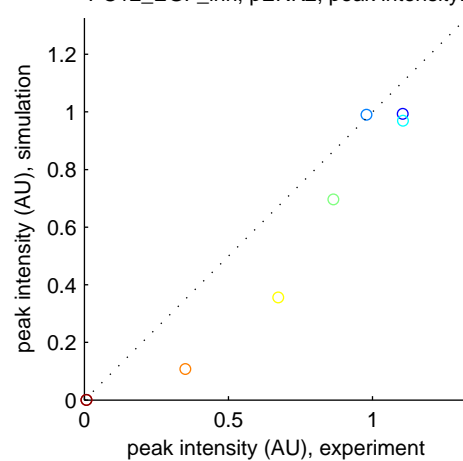
PC12_EGF_inh, cFos, experiment.



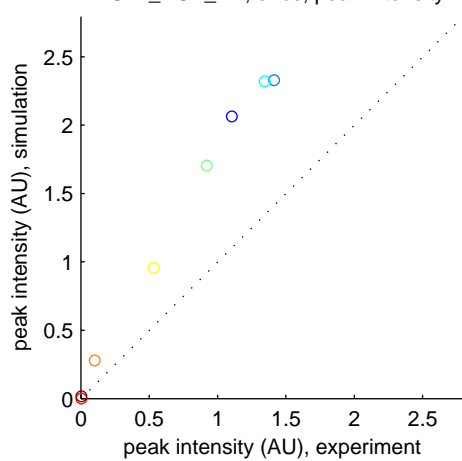
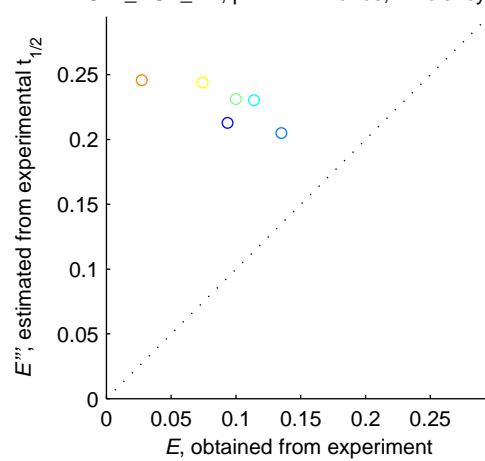
PC12_EGF_inh, cFos, simulation.

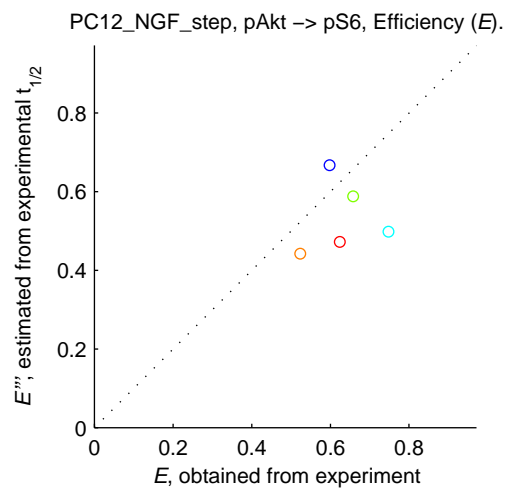
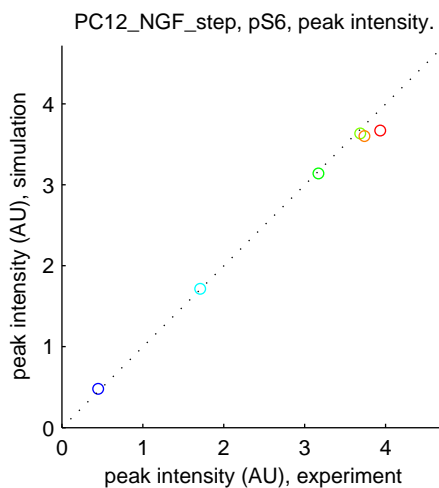
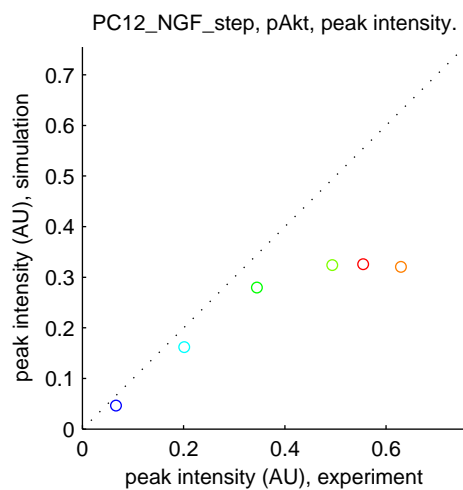
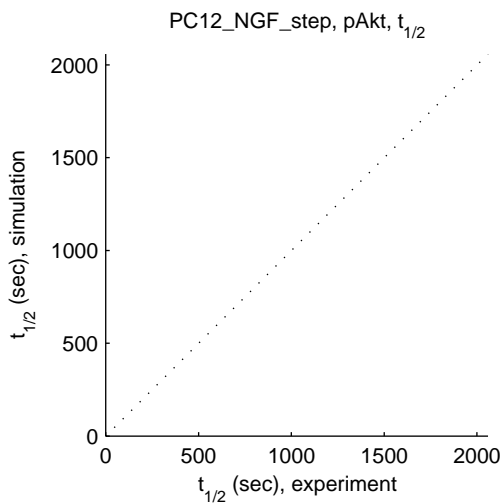
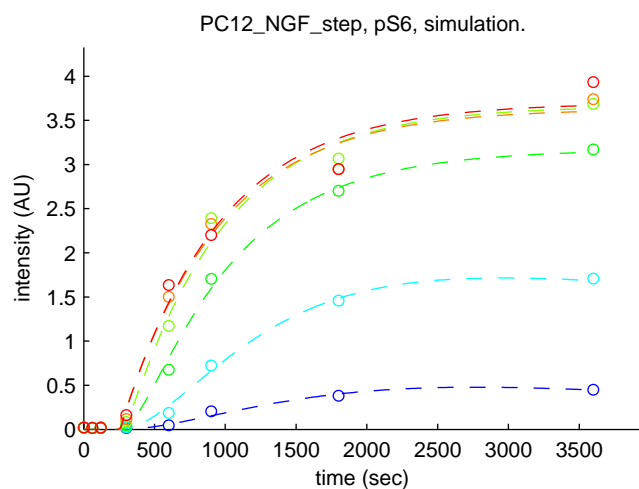
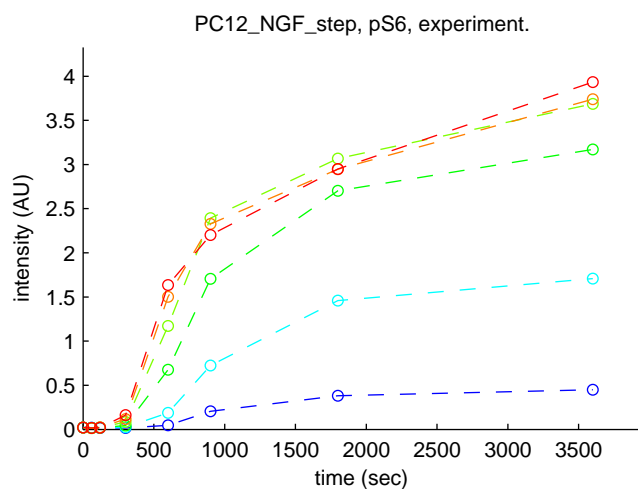
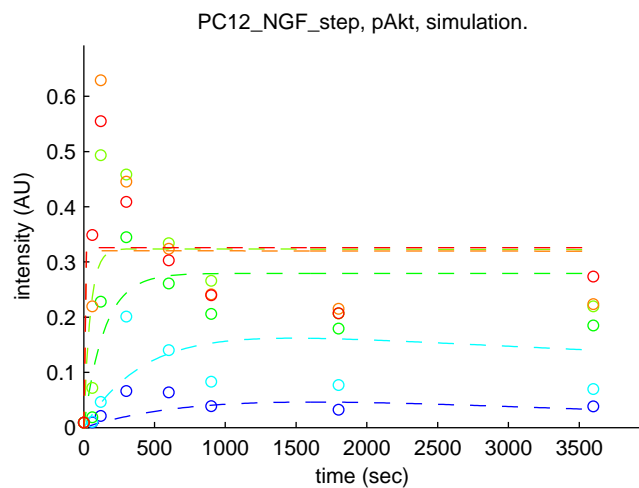
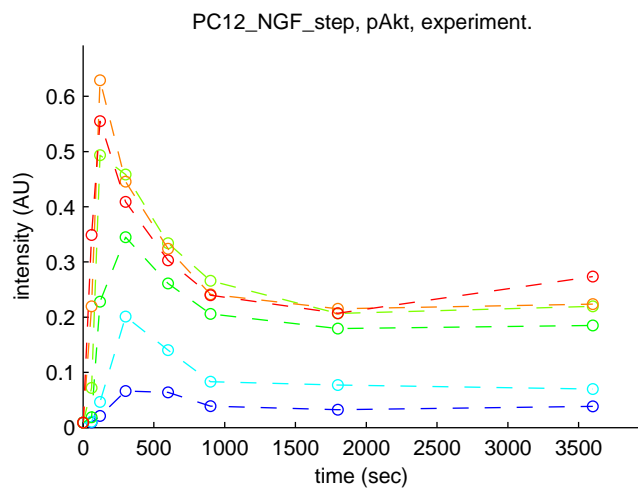
PC12_EGF_inh, pERK2, $t_{1/2}$ 

PC12_EGF_inh, pERK2, peak intensity.

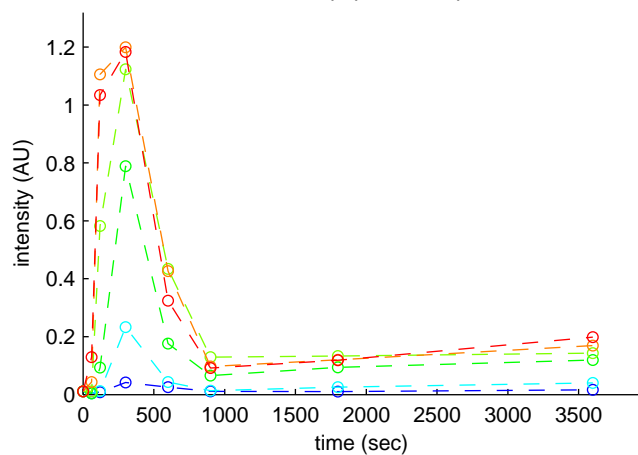


PC12_EGF_inh, cFos, peak intensity.

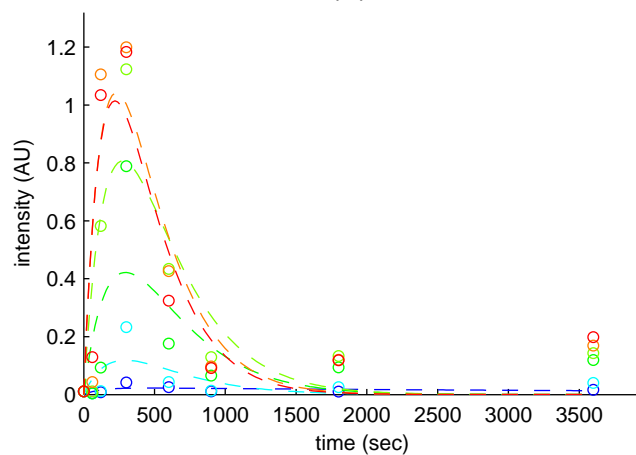
PC12_EGF_inh, pERK2 \rightarrow cFos, Efficiency (E).



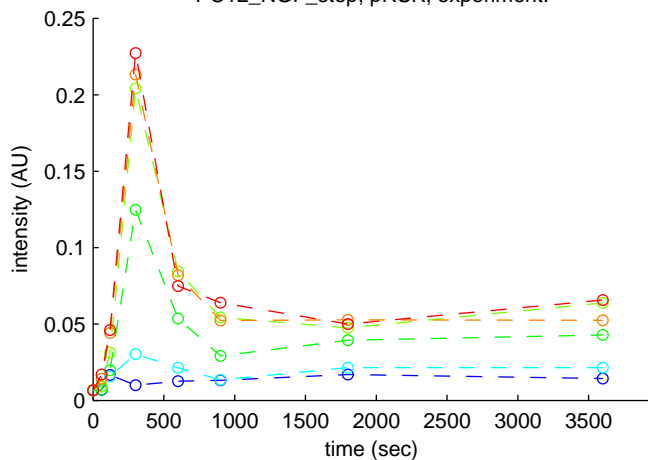
PC12_NGF_step, pERK1, experiment.



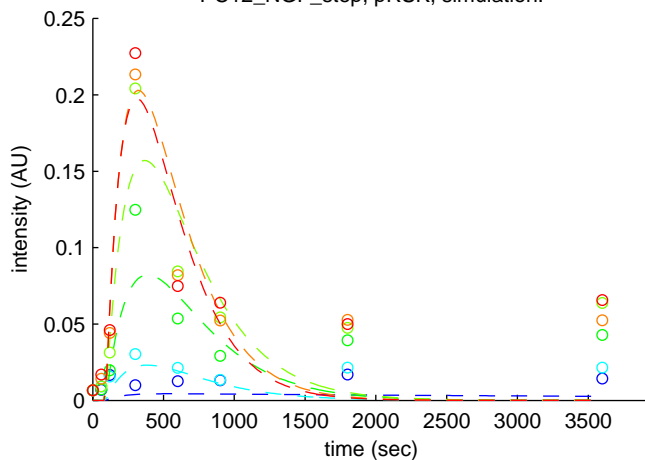
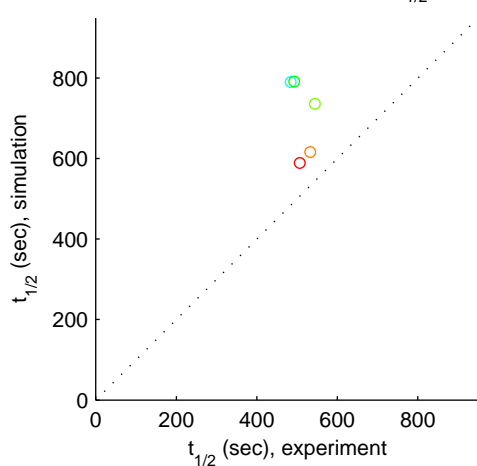
PC12_NGF_step, pERK1, simulation.



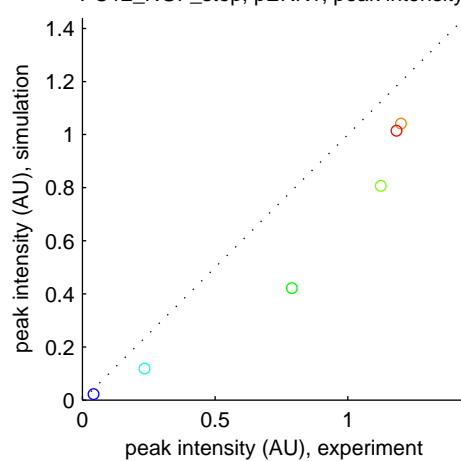
PC12_NGF_step, pRSK, experiment.



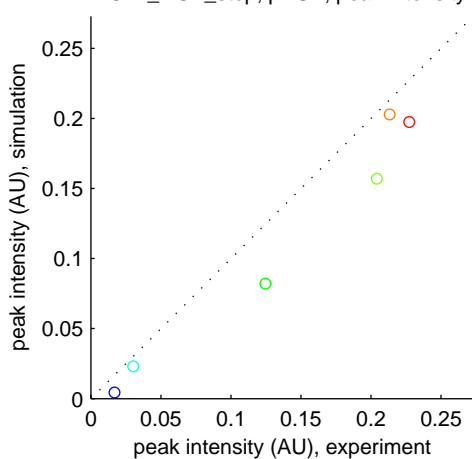
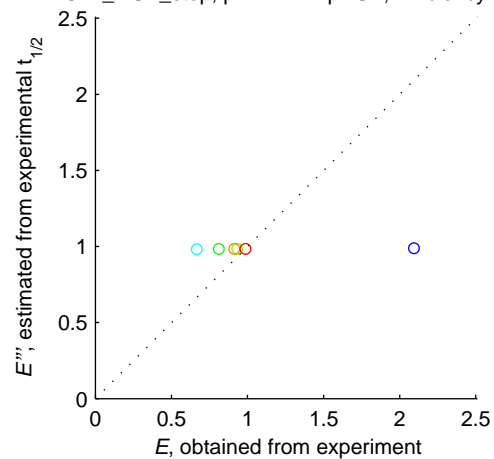
PC12_NGF_step, pRSK, simulation.

PC12_NGF_step, pERK1, $t_{1/2}$ 

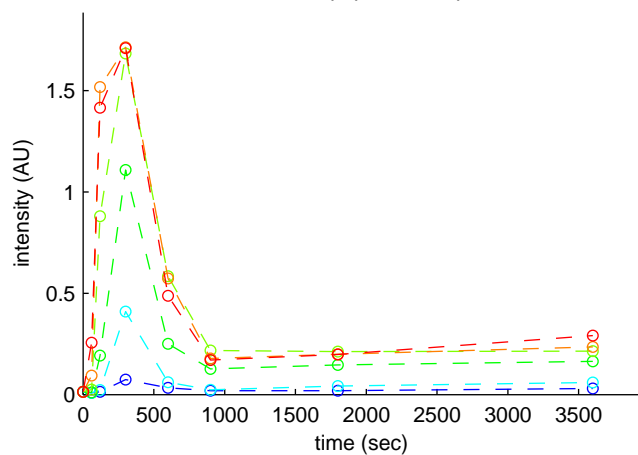
PC12_NGF_step, pERK1, peak intensity.



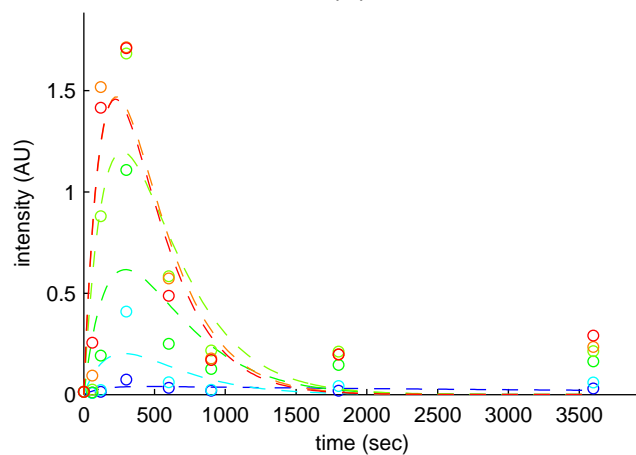
PC12_NGF_step, pRSK, peak intensity.

PC12_NGF_step, pERK1 \rightarrow pRSK, Efficiency (E).

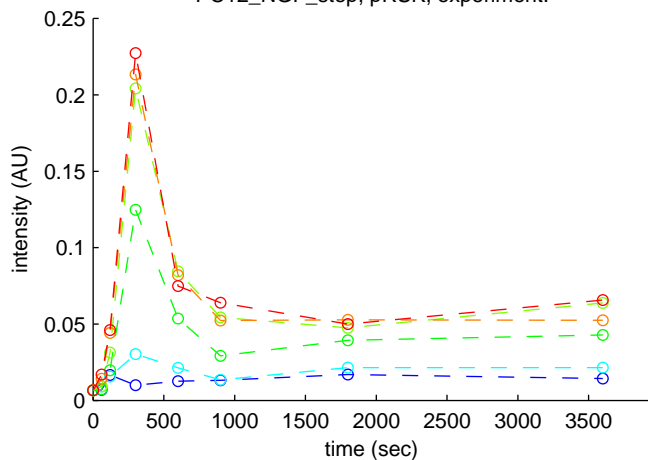
PC12_NGF_step, pERK2, experiment.



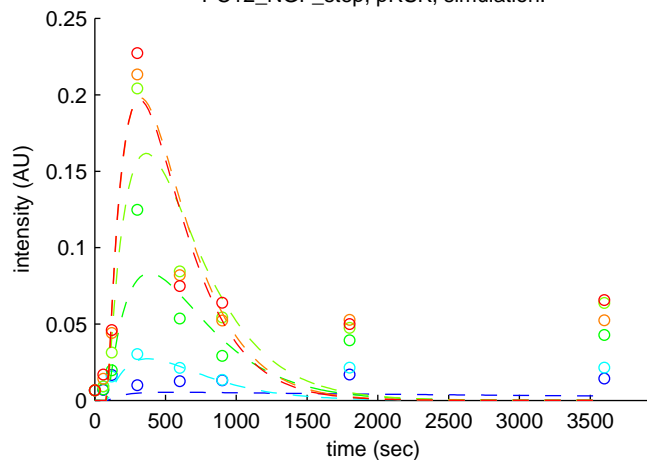
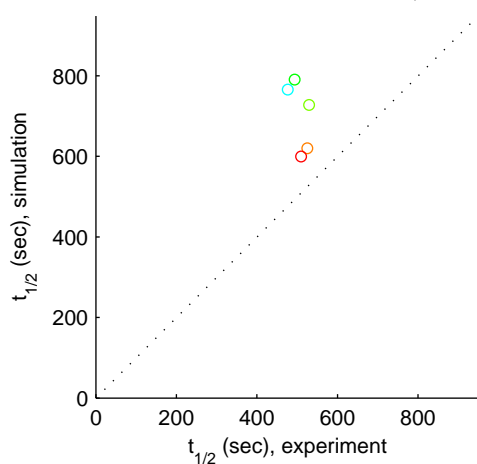
PC12_NGF_step, pERK2, simulation.



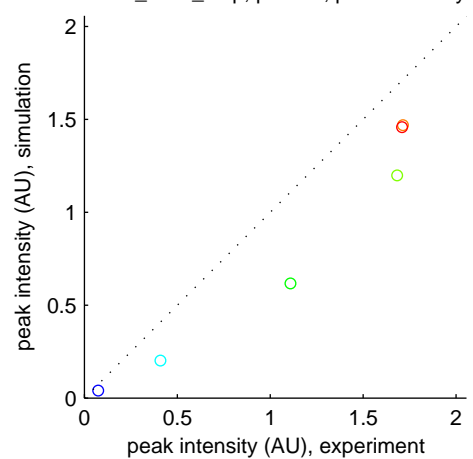
PC12_NGF_step, pRSK, experiment.



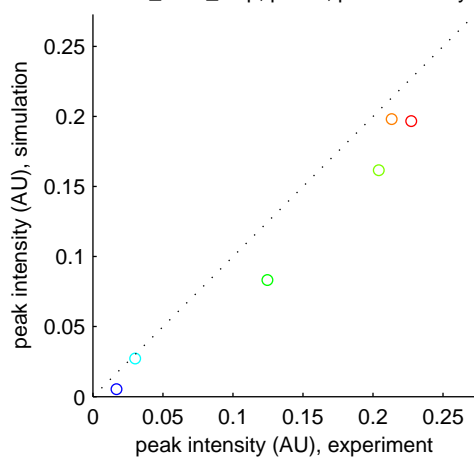
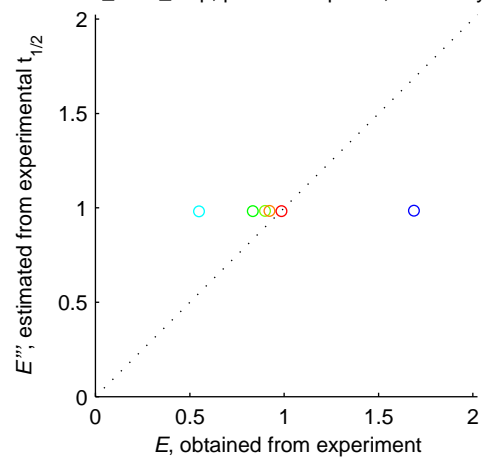
PC12_NGF_step, pRSK, simulation.

PC12_NGF_step, pERK2, $t_{1/2}$ 

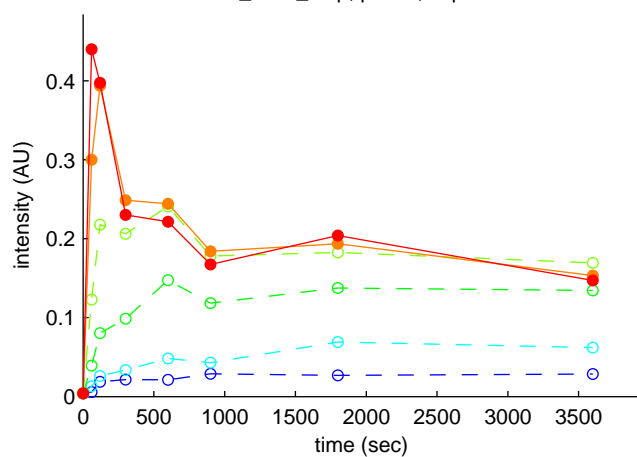
PC12_NGF_step, pERK2, peak intensity.



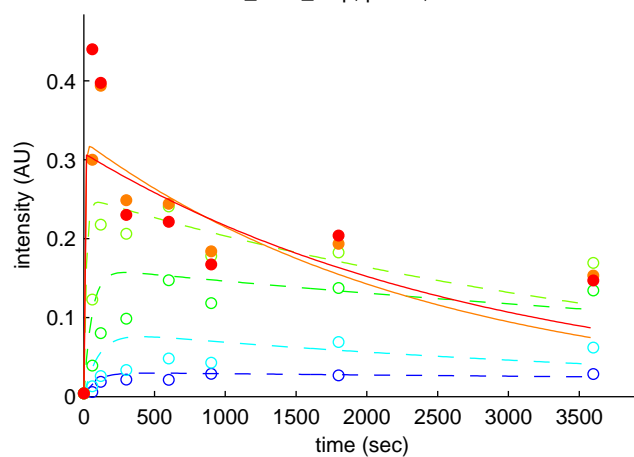
PC12_NGF_step, pRSK, peak intensity.

PC12_NGF_step, pERK2 \rightarrow pRSK, Efficiency (E).

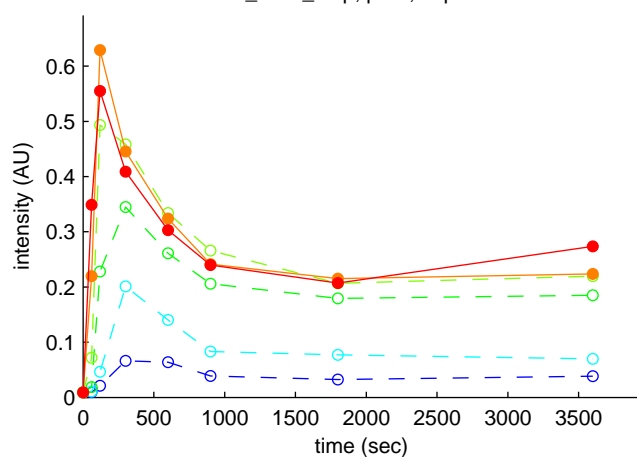
PC12_NGF_step, pTrkA, experiment.



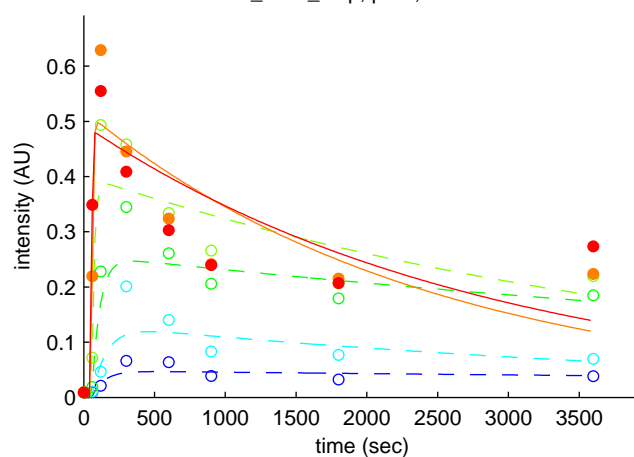
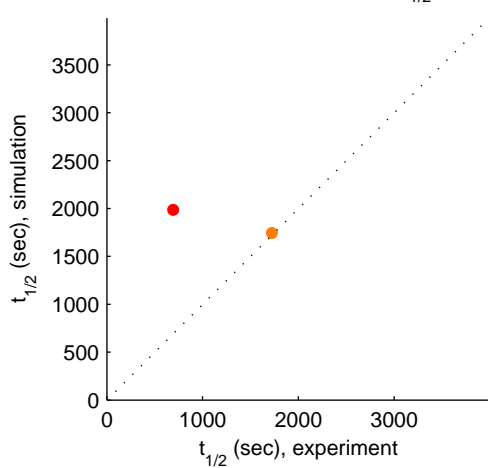
PC12_NGF_step, pTrkA, simulation.



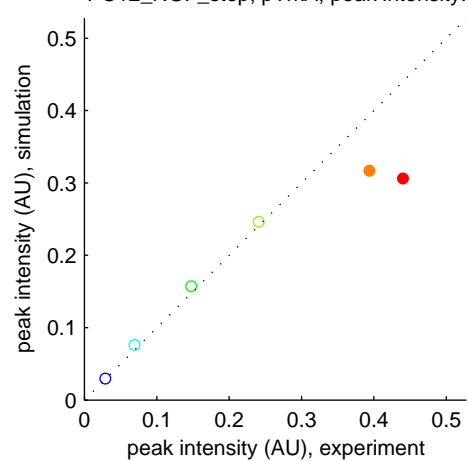
PC12_NGF_step, pAkt, experiment.



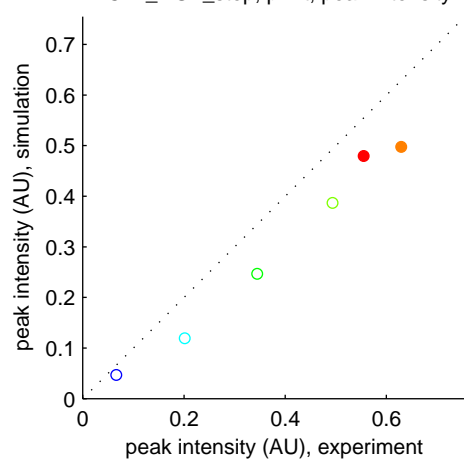
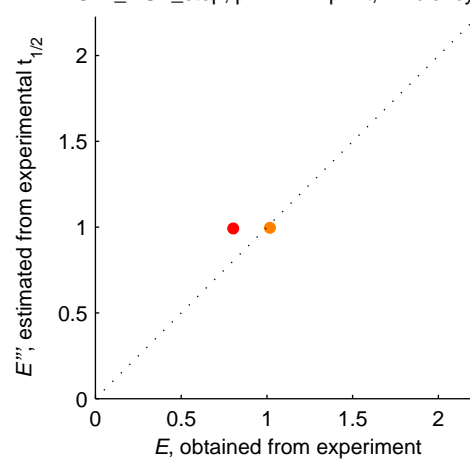
PC12_NGF_step, pAkt, simulation.

PC12_NGF_step, pTrkA, $t_{1/2}$ 

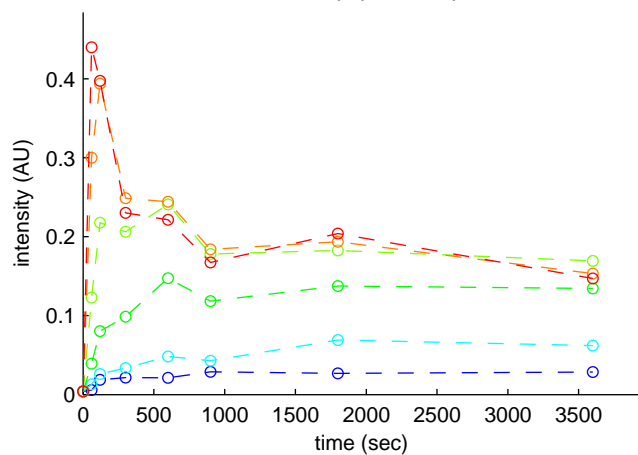
PC12_NGF_step, pTrkA, peak intensity.



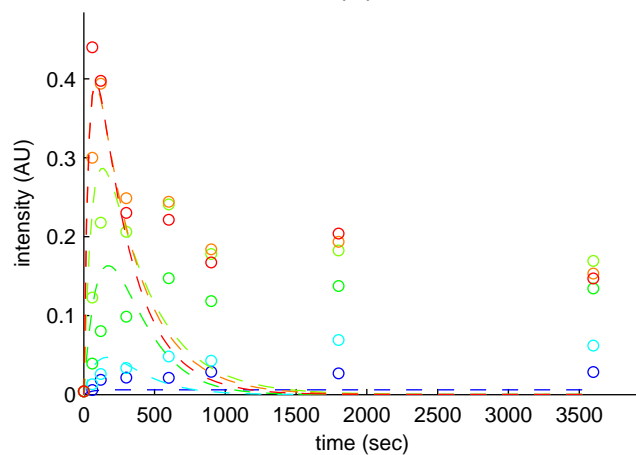
PC12_NGF_step, pAkt, peak intensity.

PC12_NGF_step, pTrkA \rightarrow pAkt, Efficiency (E).

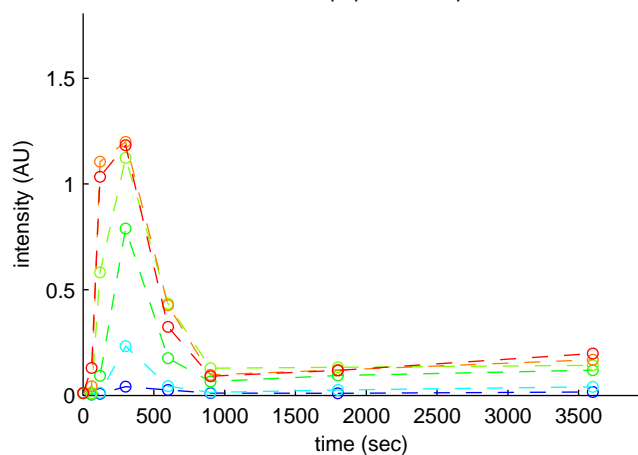
PC12_NGF_step, pTrkA, experiment.



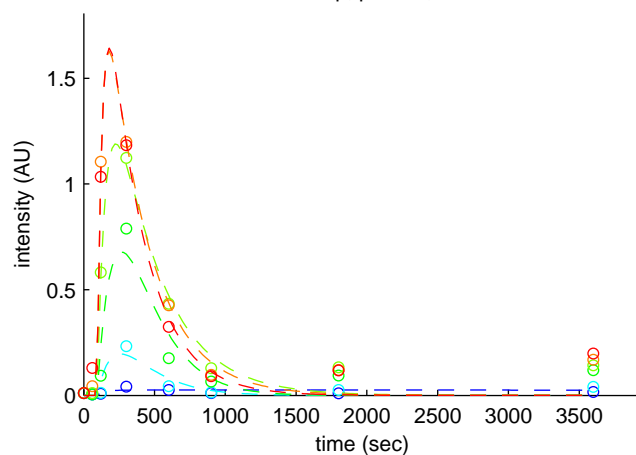
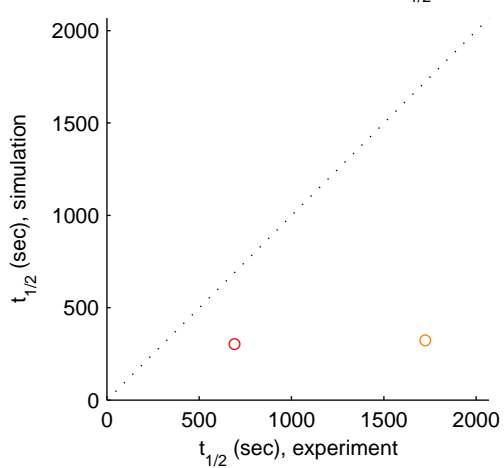
PC12_NGF_step, pTrkA, simulation.



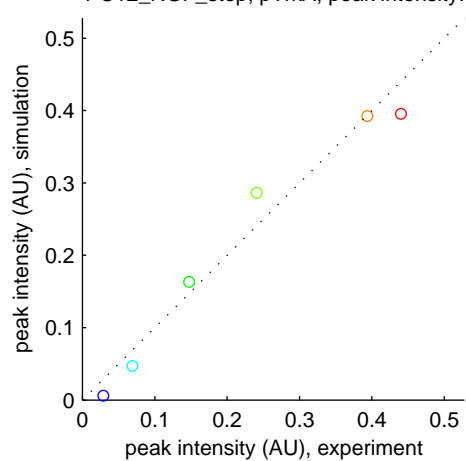
PC12_NGF_step, pERK1, experiment.



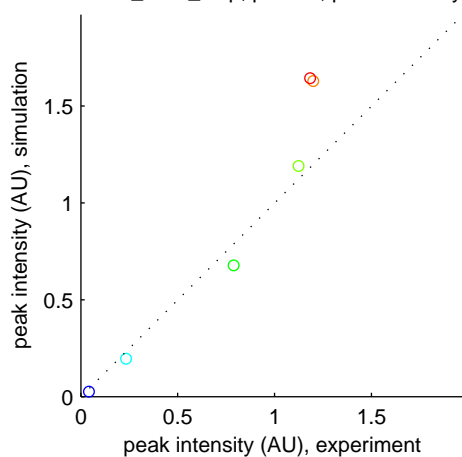
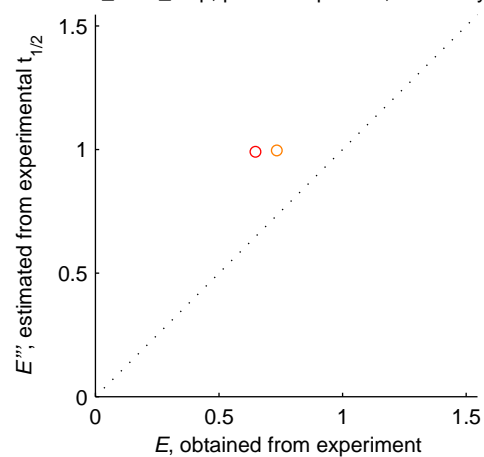
PC12_NGF_step, pERK1, simulation.

PC12_NGF_step, pTrkA, $t_{1/2}$ 

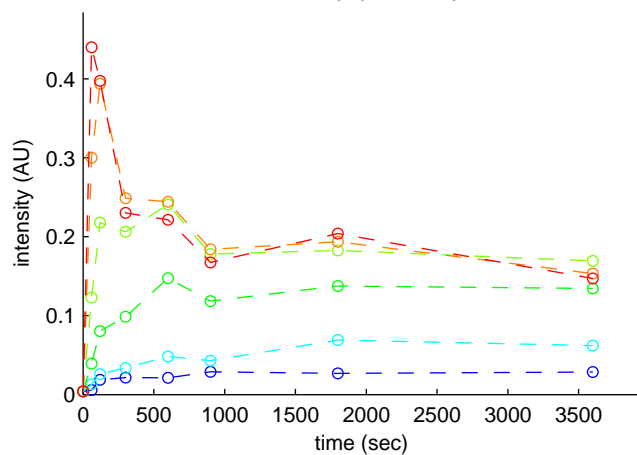
PC12_NGF_step, pTrkA, peak intensity.



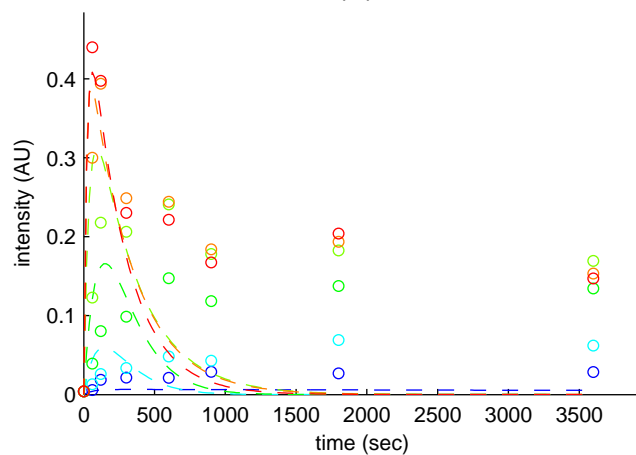
PC12_NGF_step, pERK1, peak intensity.

PC12_NGF_step, pTrkA \rightarrow pERK1, Efficiency (E).

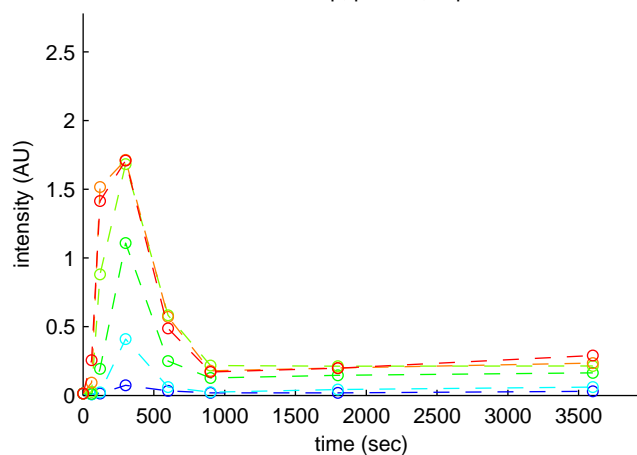
PC12_NGF_step, pTrkA, experiment.



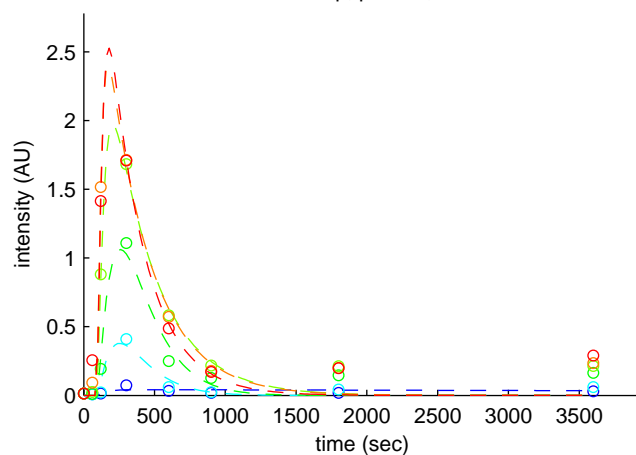
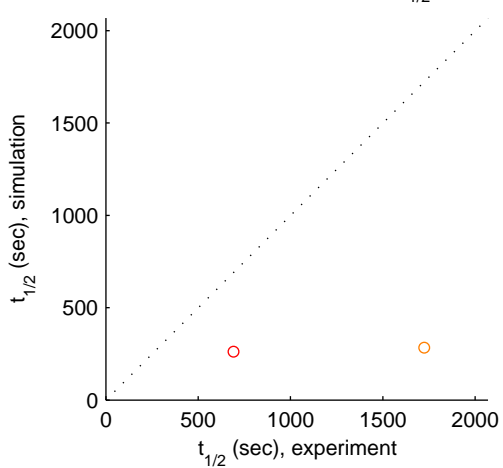
PC12_NGF_step, pTrkA, simulation.



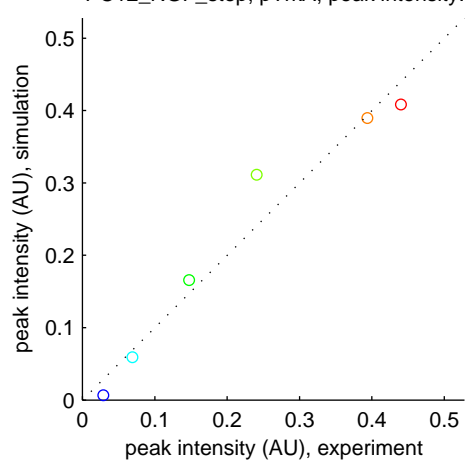
PC12_NGF_step, pERK2, experiment.



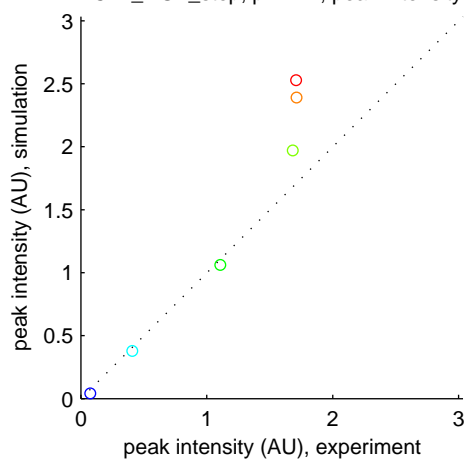
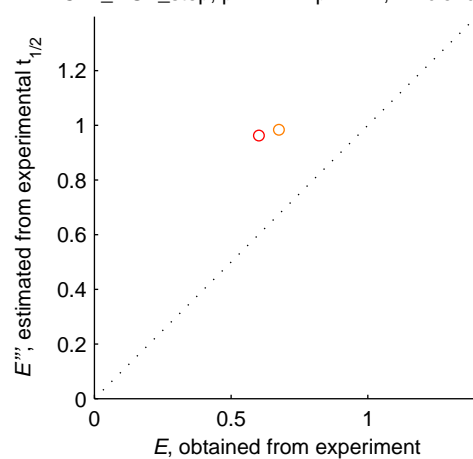
PC12_NGF_step, pERK2, simulation.

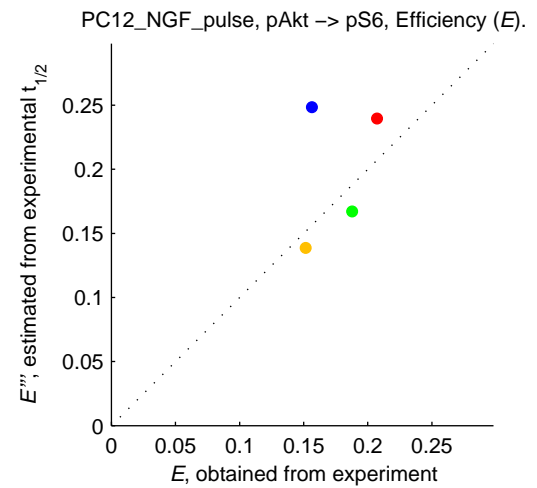
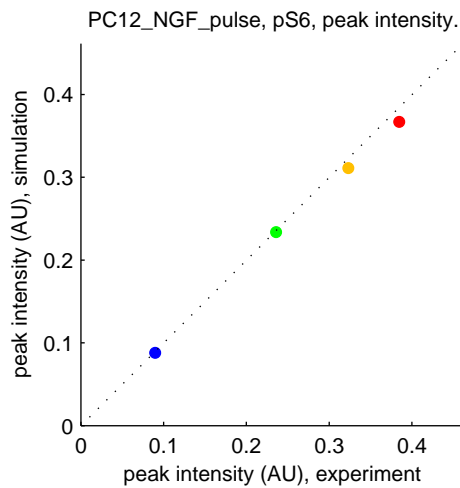
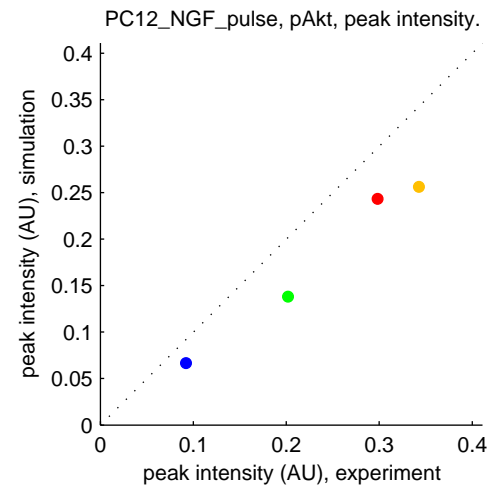
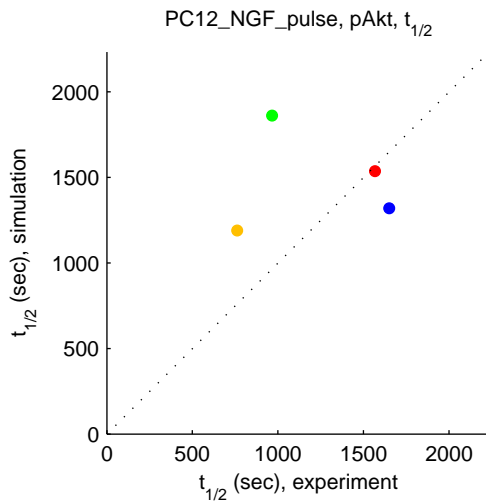
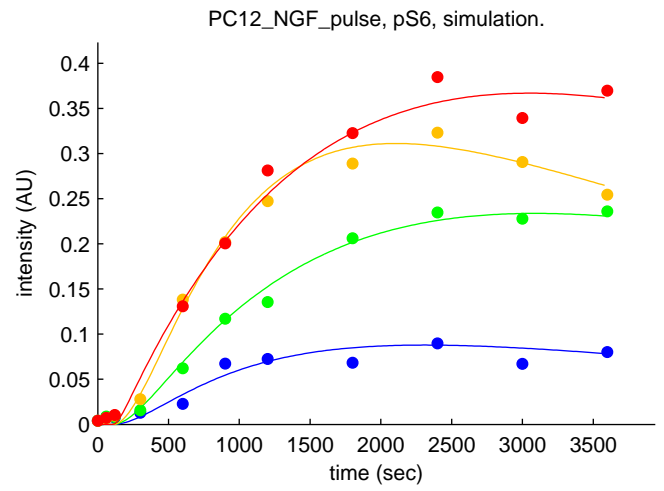
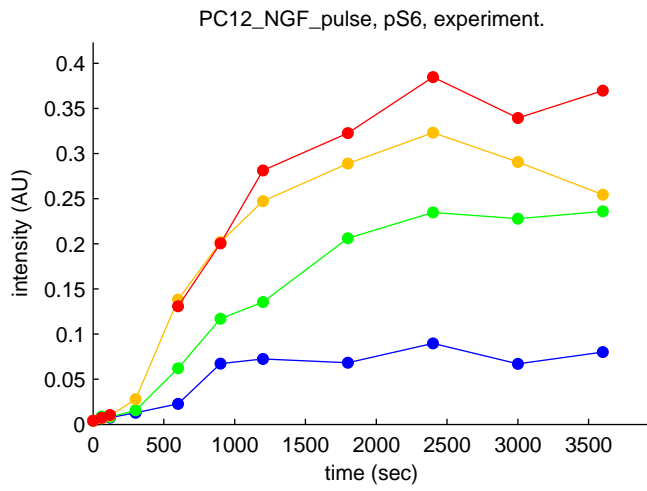
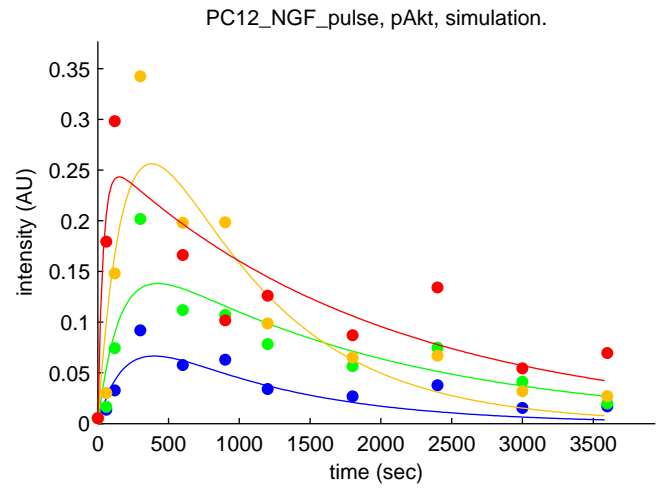
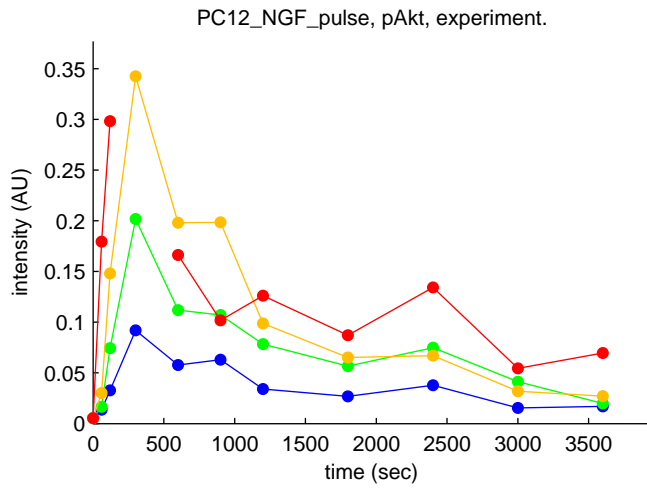
PC12_NGF_step, pTrkA, $t_{1/2}$ 

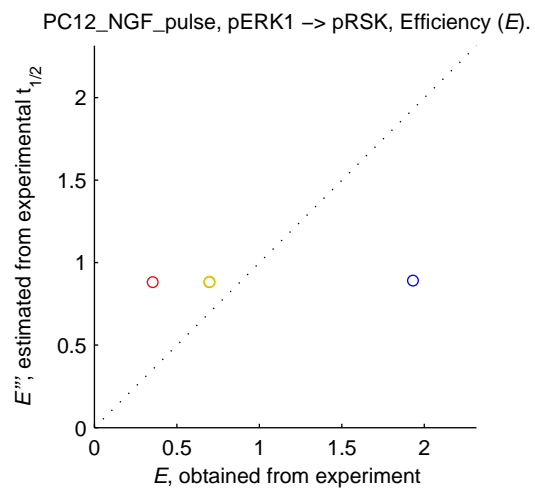
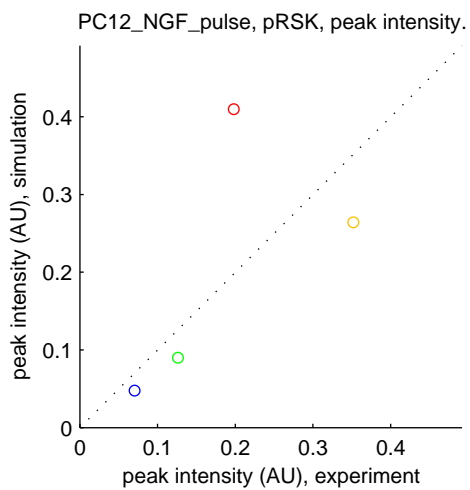
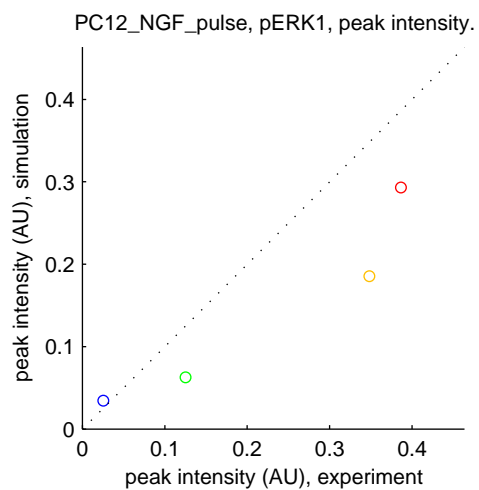
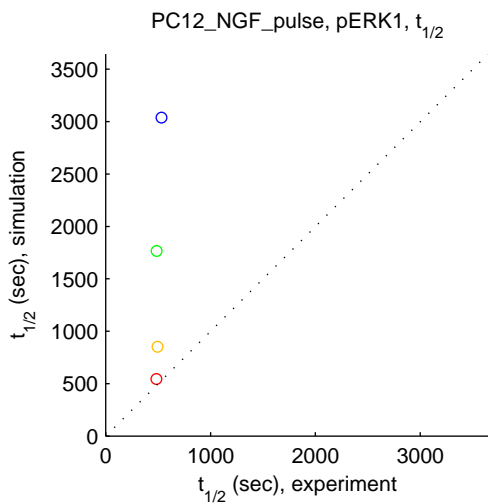
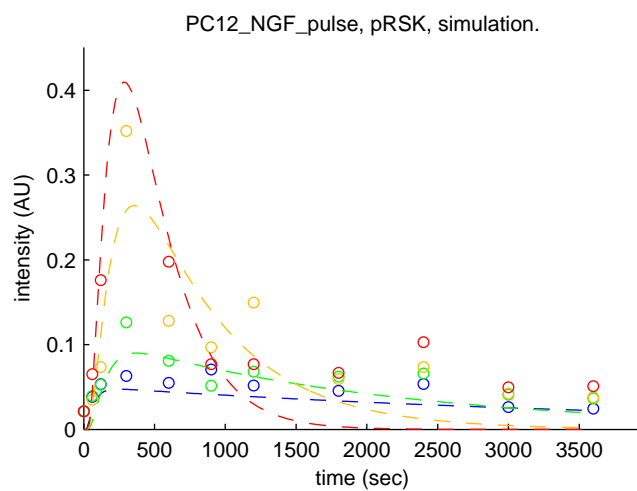
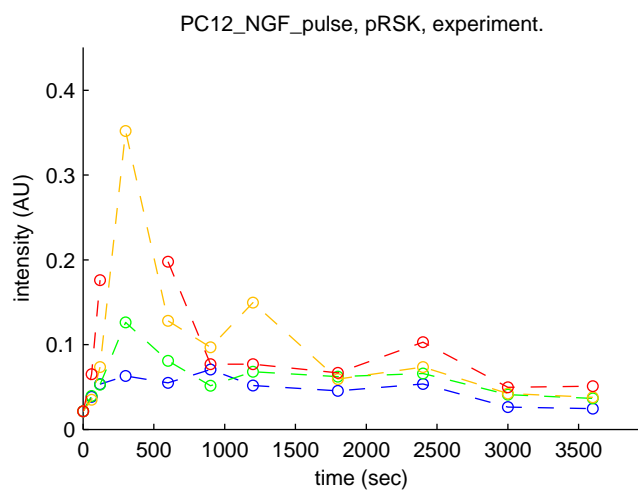
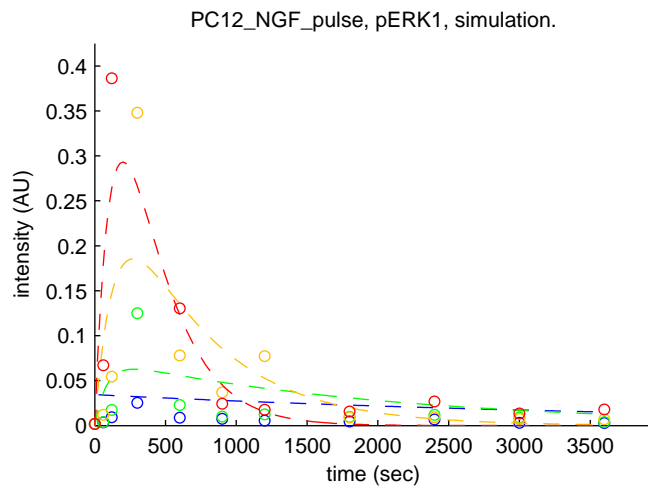
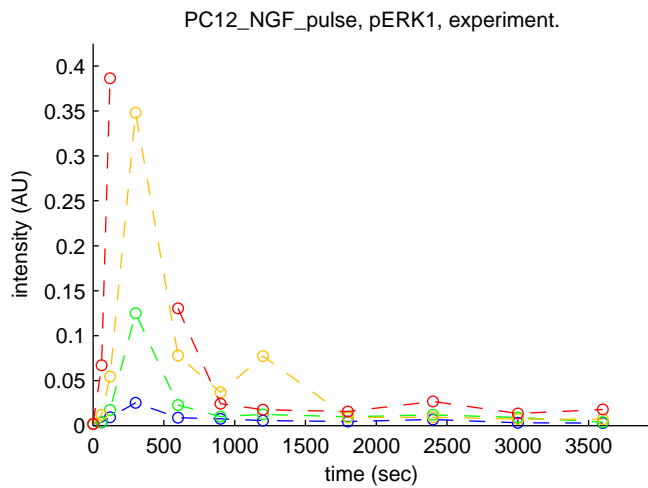
PC12_NGF_step, pTrkA, peak intensity.



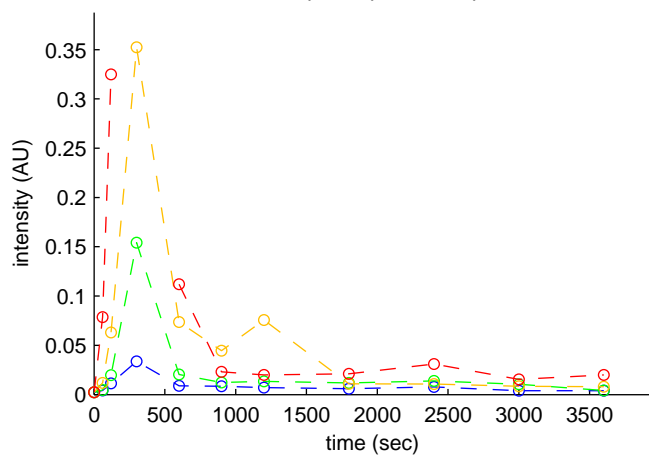
PC12_NGF_step, pERK2, peak intensity.

PC12_NGF_step, pTrkA \rightarrow pERK2, Efficiency (E).

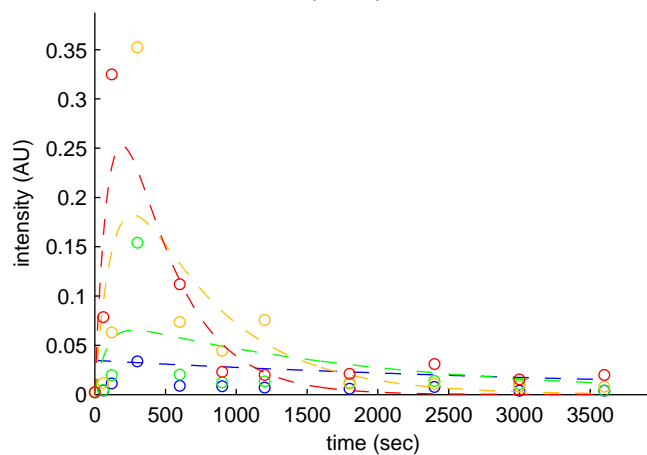




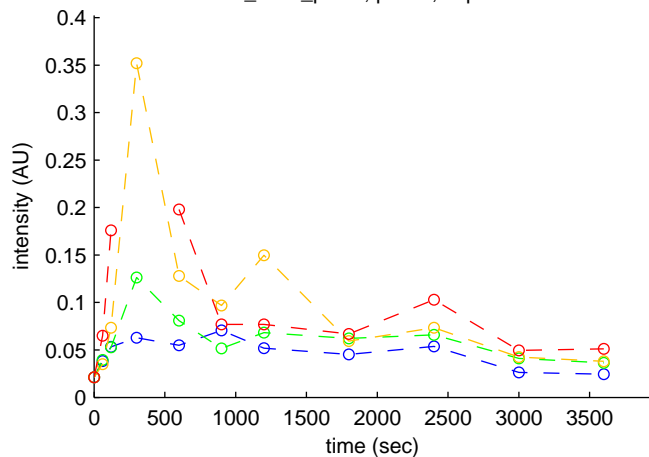
PC12_NGF_pulse, pERK2, experiment.



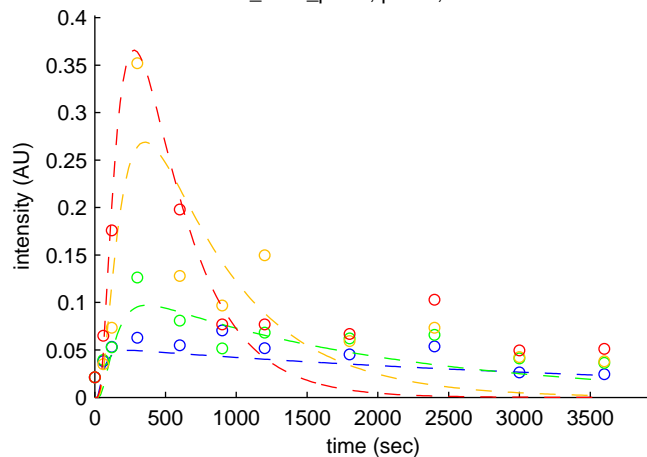
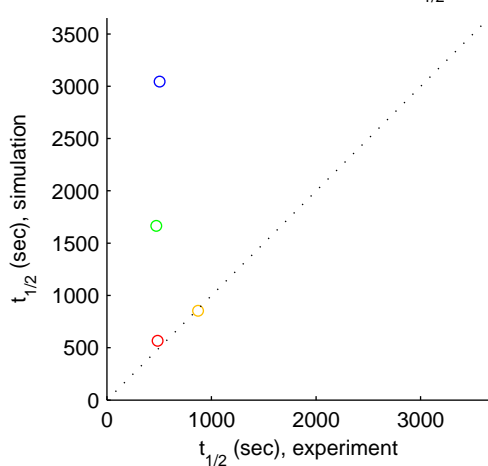
PC12_NGF_pulse, pERK2, simulation.



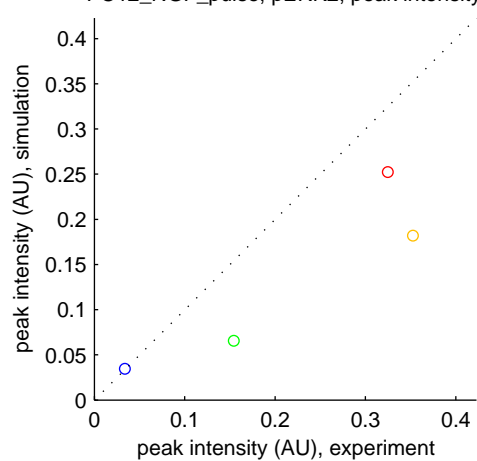
PC12_NGF_pulse, pRSK, experiment.



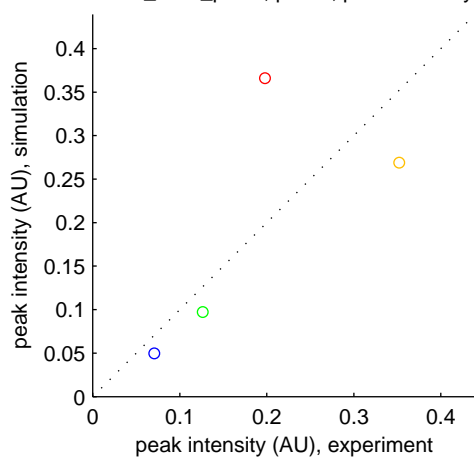
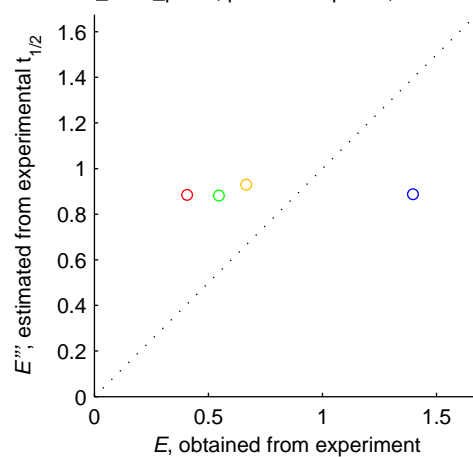
PC12_NGF_pulse, pRSK, simulation.

PC12_NGF_pulse, pERK2, $t_{1/2}$ 

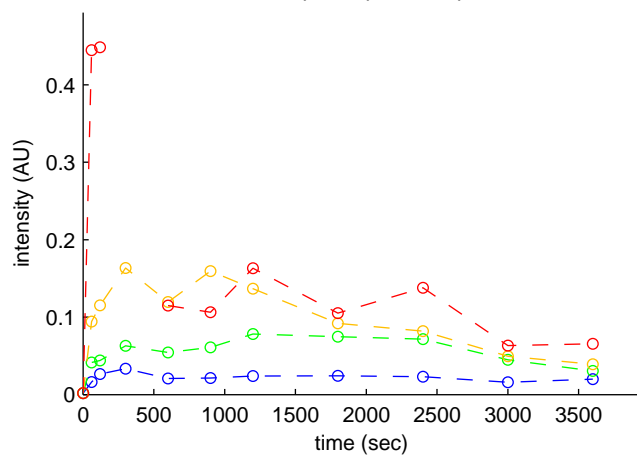
PC12_NGF_pulse, pERK2, peak intensity.



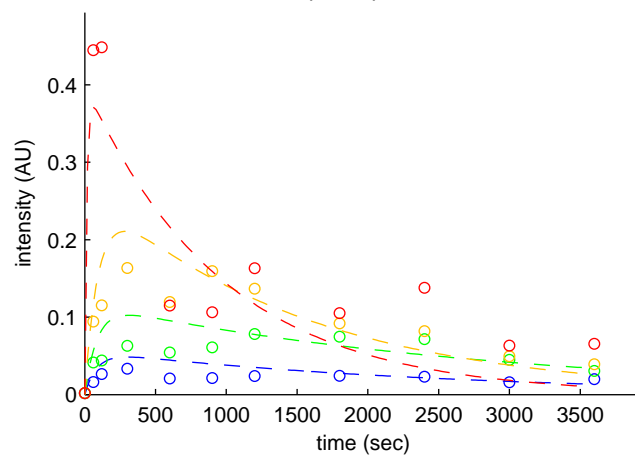
PC12_NGF_pulse, pRSK, peak intensity.

PC12_NGF_pulse, pERK2 \rightarrow pRSK, Efficiency (E).

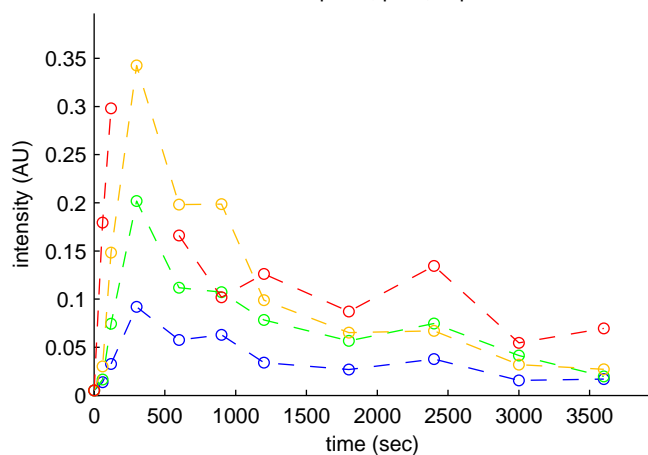
PC12_NGF_pulse, pTrkA, experiment.



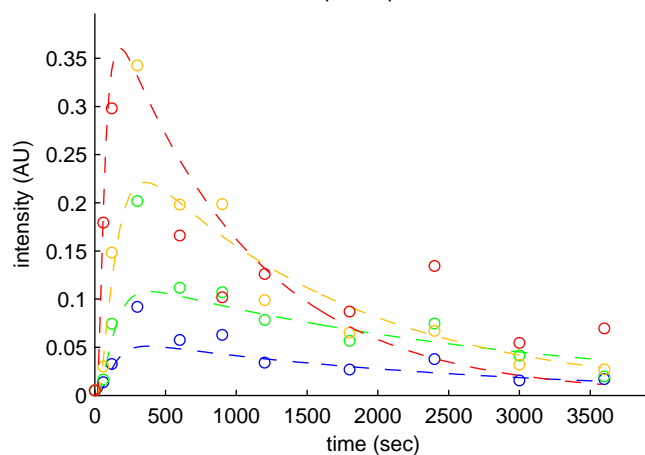
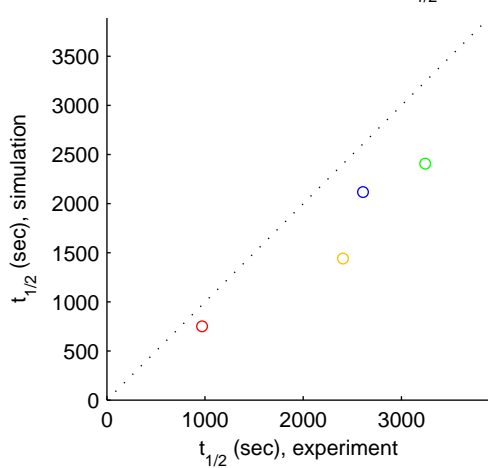
PC12_NGF_pulse, pTrkA, simulation.



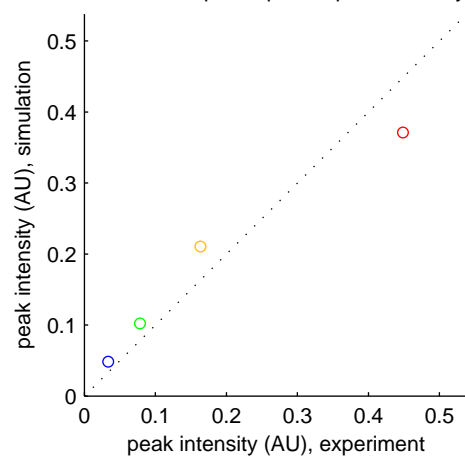
PC12_NGF_pulse, pAkt, experiment.



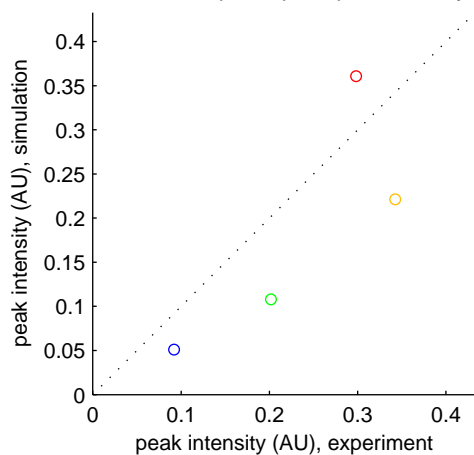
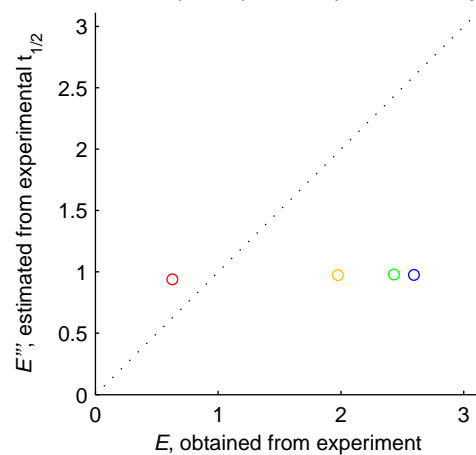
PC12_NGF_pulse, pAkt, simulation.

PC12_NGF_pulse, pTrkA, $t_{1/2}$ 

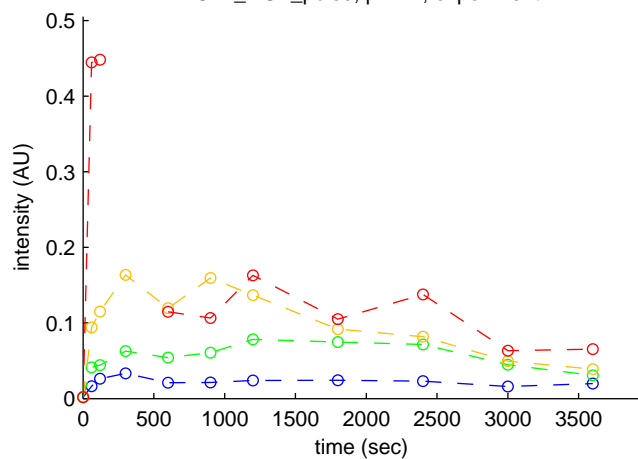
PC12_NGF_pulse, pTrkA, peak intensity.



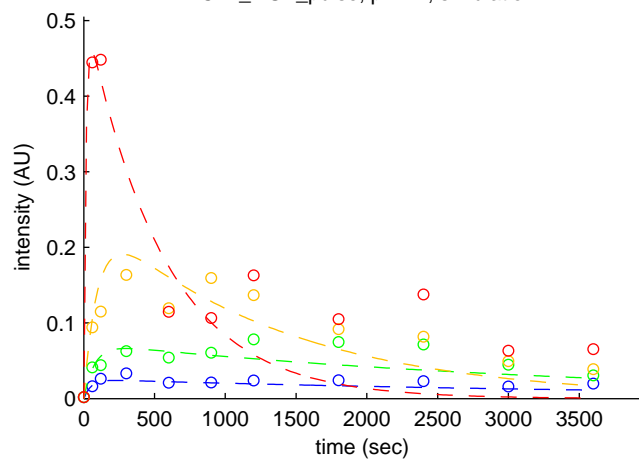
PC12_NGF_pulse, pAkt, peak intensity.

PC12_NGF_pulse, pTrkA \rightarrow pAkt, Efficiency (E).

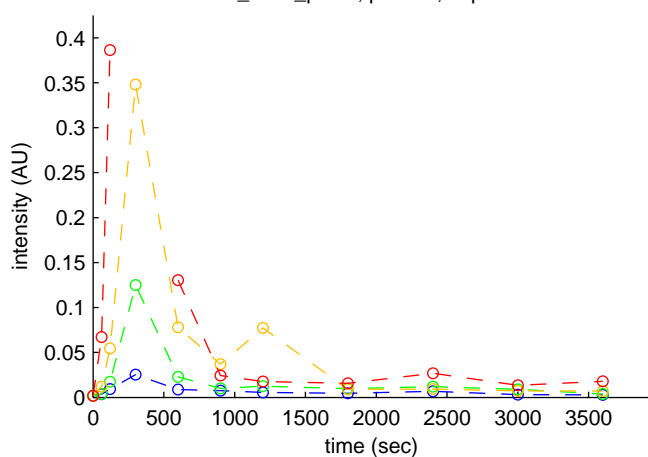
PC12_NGF_pulse, pTrkA, experiment.



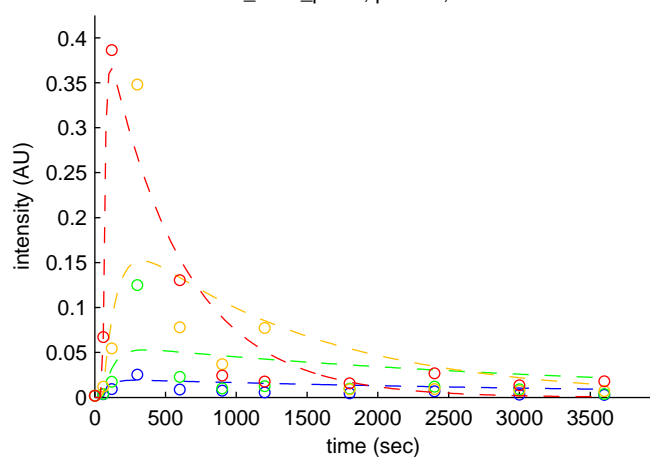
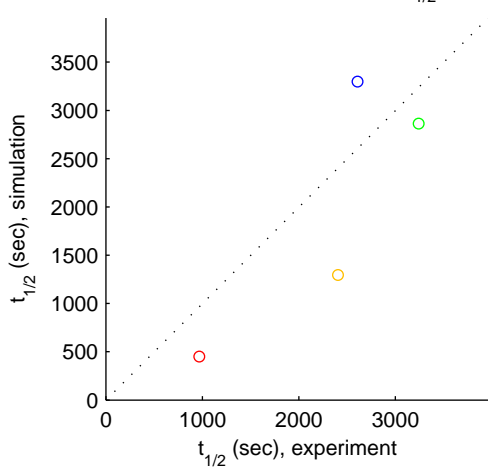
PC12_NGF_pulse, pTrkA, simulation.



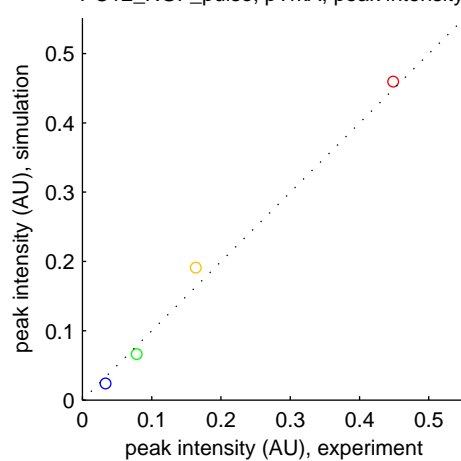
PC12_NGF_pulse, pERK1, experiment.



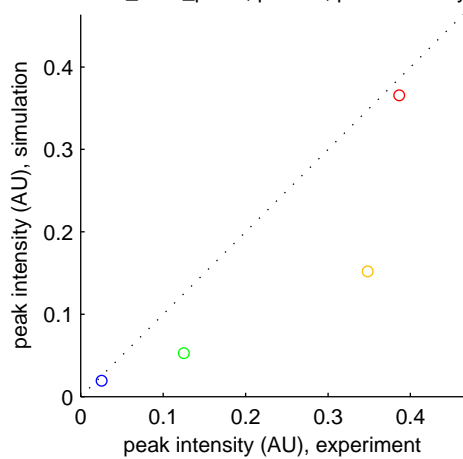
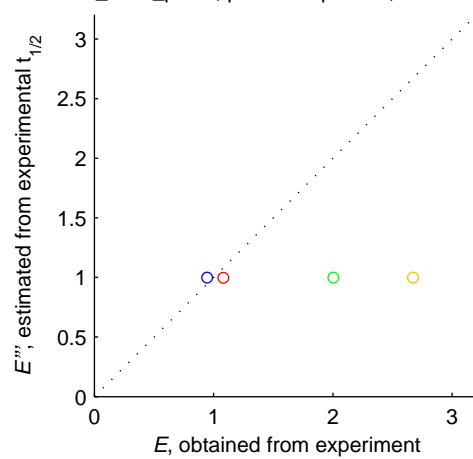
PC12_NGF_pulse, pERK1, simulation.

PC12_NGF_pulse, pTrkA, $t_{1/2}$ 

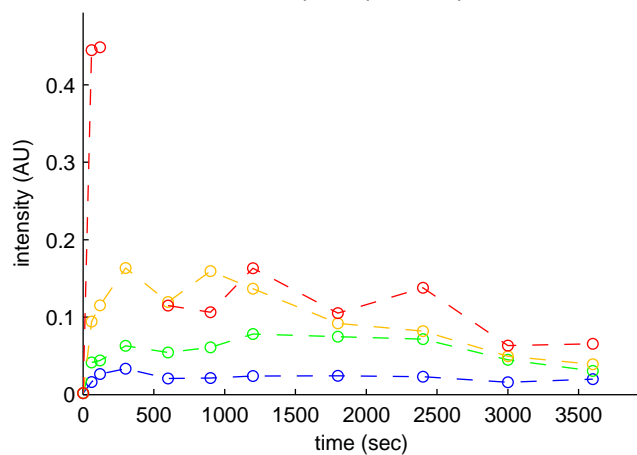
PC12_NGF_pulse, pTrkA, peak intensity.



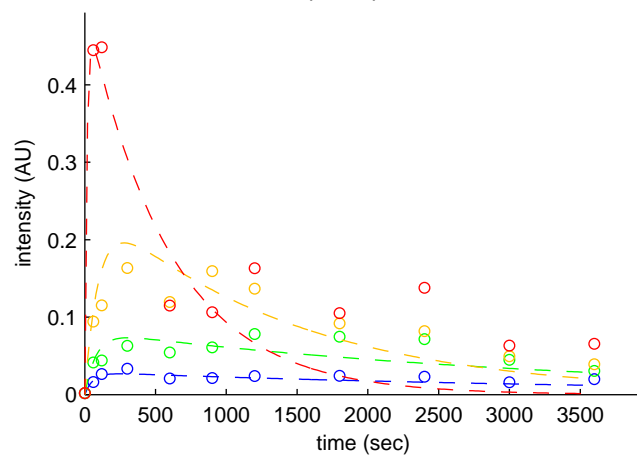
PC12_NGF_pulse, pERK1, peak intensity.

PC12_NGF_pulse, pTrkA \rightarrow pERK1, Efficiency (E).

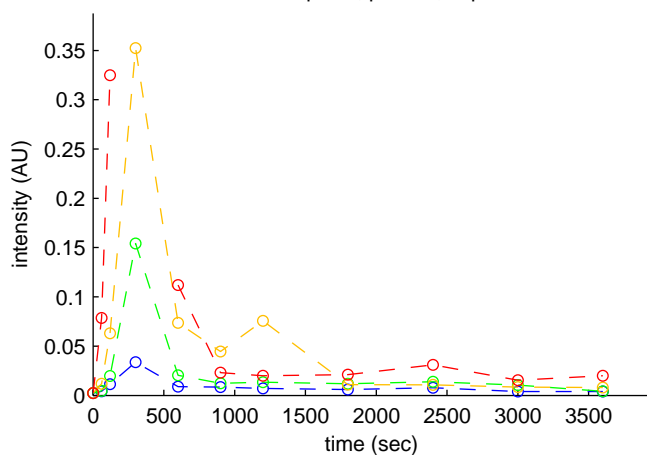
PC12_NGF_pulse, pTrkA, experiment.



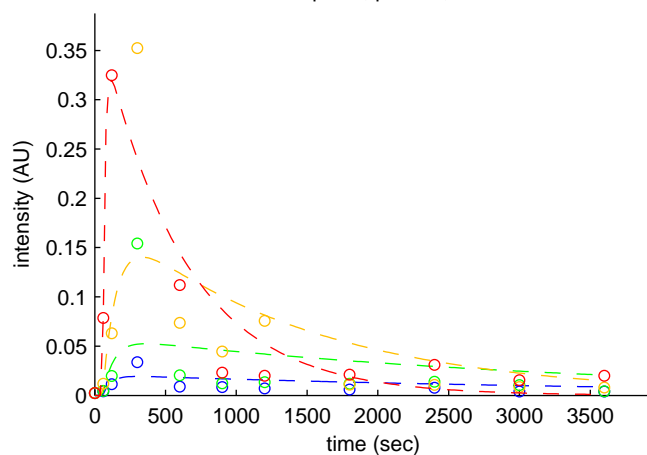
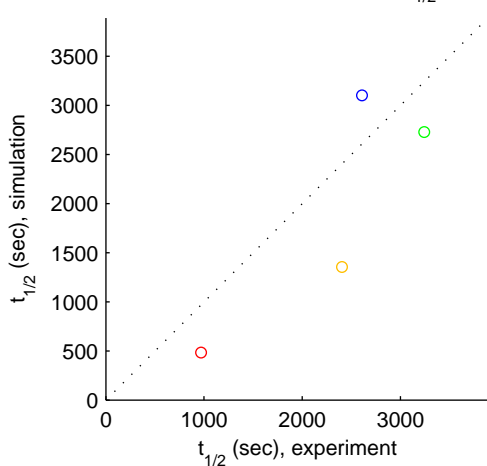
PC12_NGF_pulse, pTrkA, simulation.



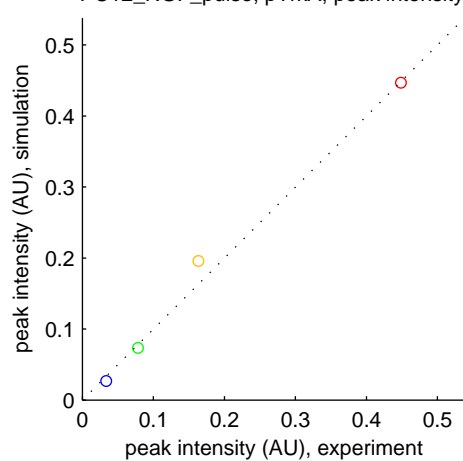
PC12_NGF_pulse, pERK2, experiment.



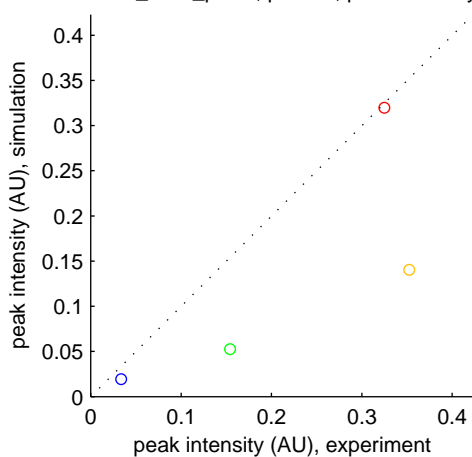
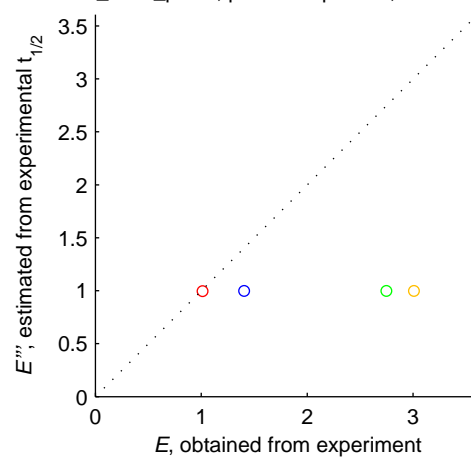
PC12_NGF_pulse, pERK2, simulation.

PC12_NGF_pulse, pTrkA, $t_{1/2}$ 

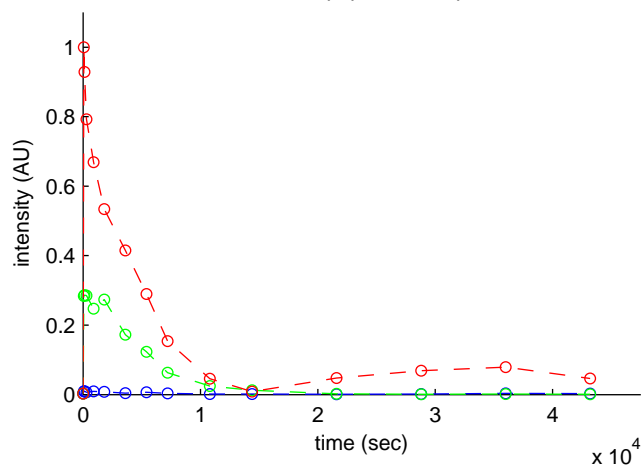
PC12_NGF_pulse, pTrkA, peak intensity.



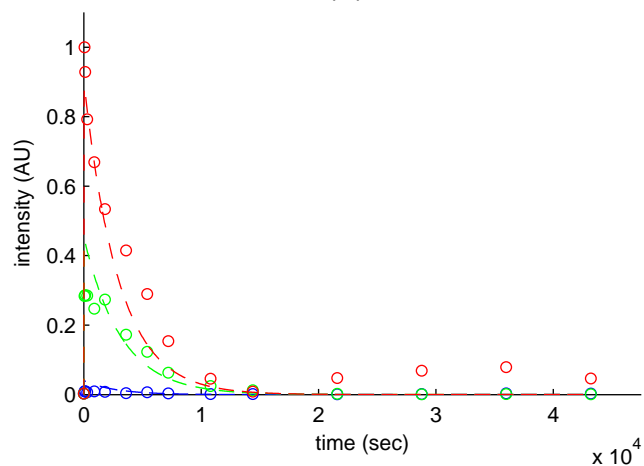
PC12_NGF_pulse, pERK2, peak intensity.

PC12_NGF_pulse, pTrkA \rightarrow pERK2, Efficiency (E).

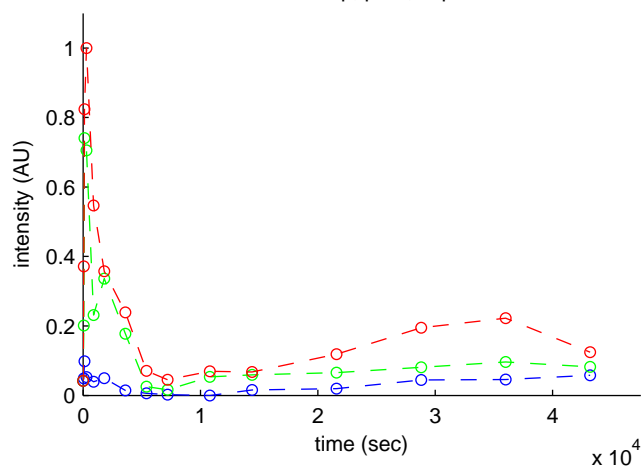
HeLa_EGF_step, pEGFR, experiment.



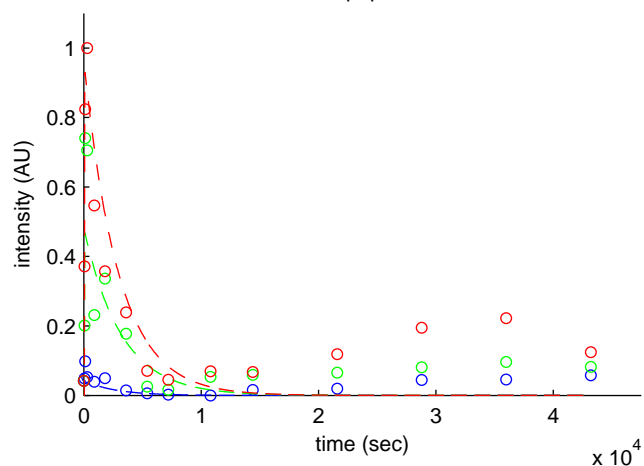
HeLa_EGF_step, pEGFR, simulation.



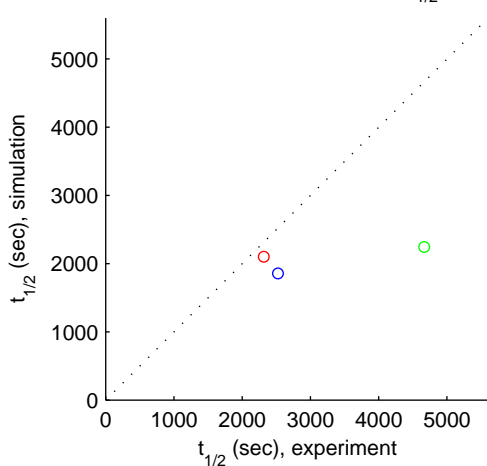
HeLa_EGF_step, pAkt, experiment.



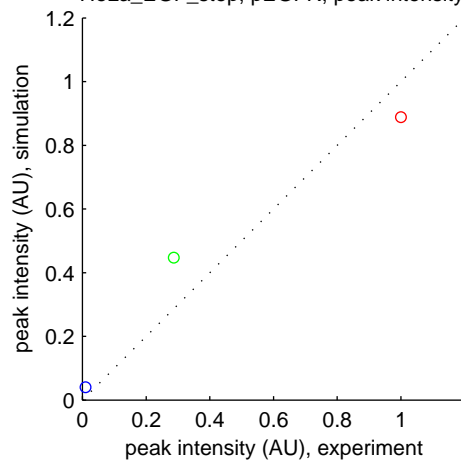
HeLa_EGF_step, pAkt, simulation.



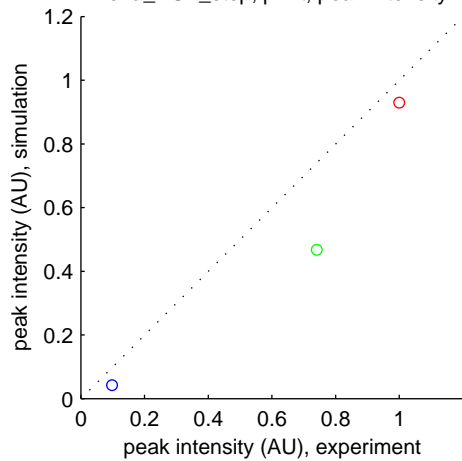
HeLa_EGF_step, pEGFR, $t_{1/2}$



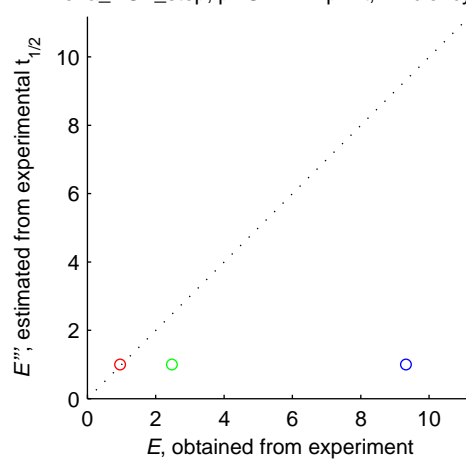
HeLa_EGF_step, pEGFR, peak intensity.



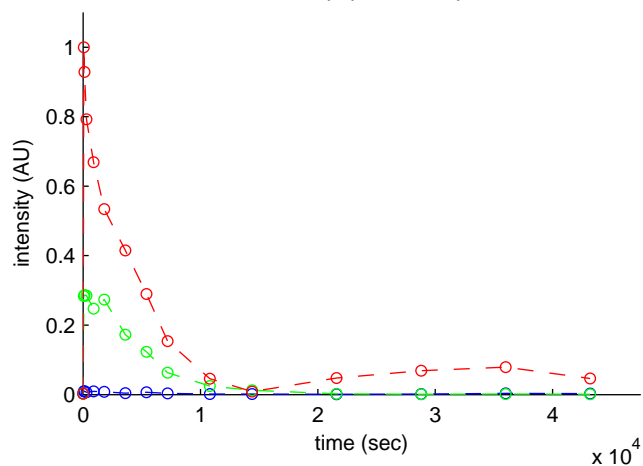
HeLa_EGF_step, pAkt, peak intensity.



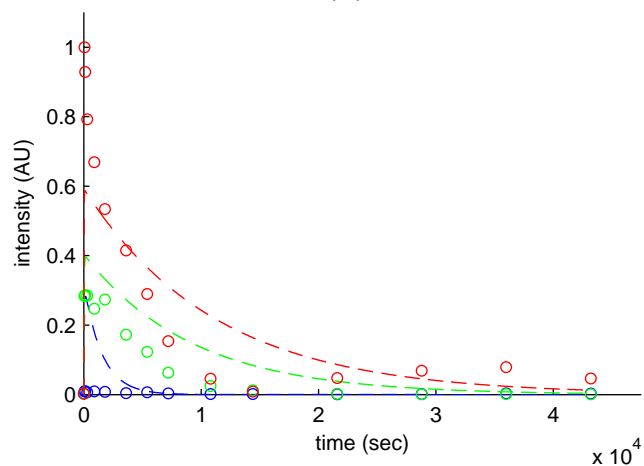
HeLa_EGF_step, pEGFR \rightarrow pAkt, Efficiency (E).



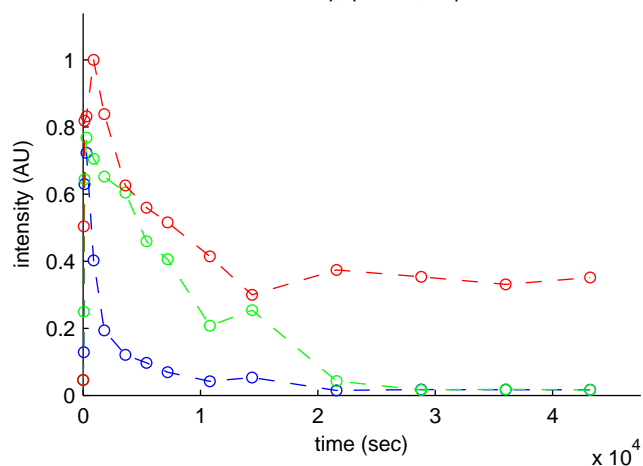
HeLa_EGF_step, pEGFR, experiment.



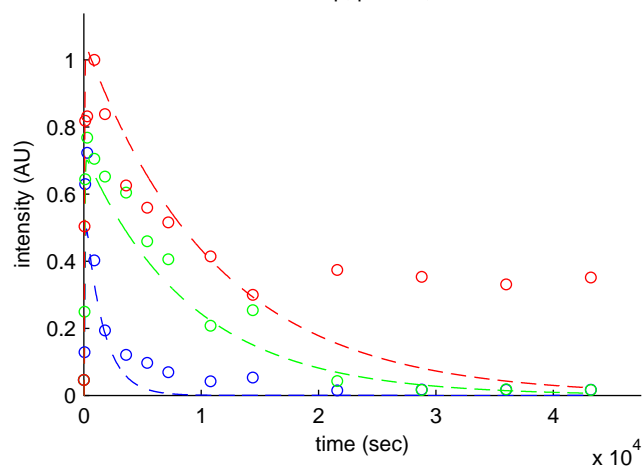
HeLa_EGF_step, pEGFR, simulation.



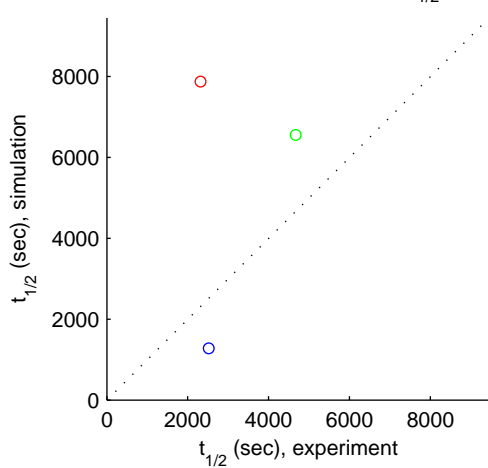
HeLa_EGF_step, pERK1, experiment.



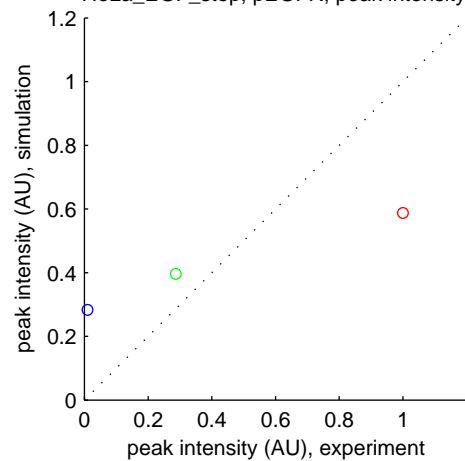
HeLa_EGF_step, pERK1, simulation.



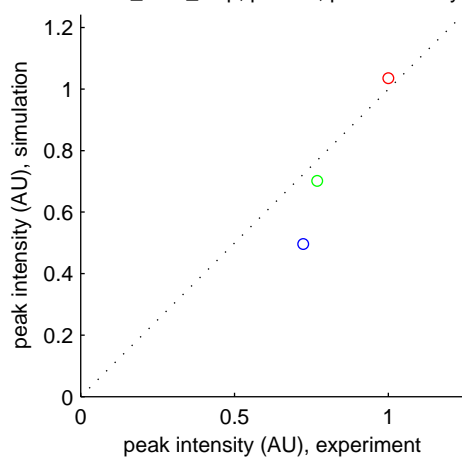
HeLa_EGF_step, pEGFR, $t_{1/2}$



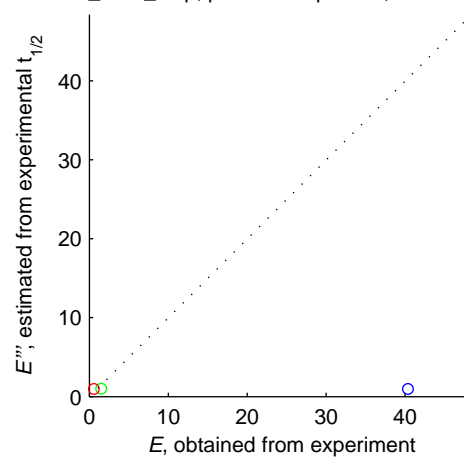
HeLa_EGF_step, pEGFR, peak intensity.

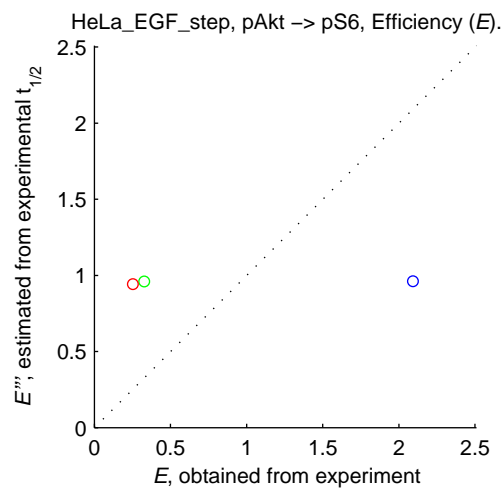
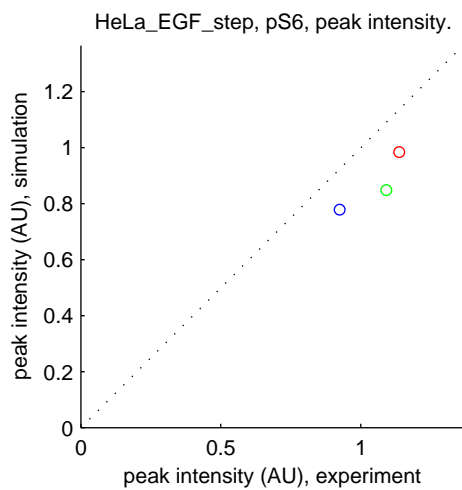
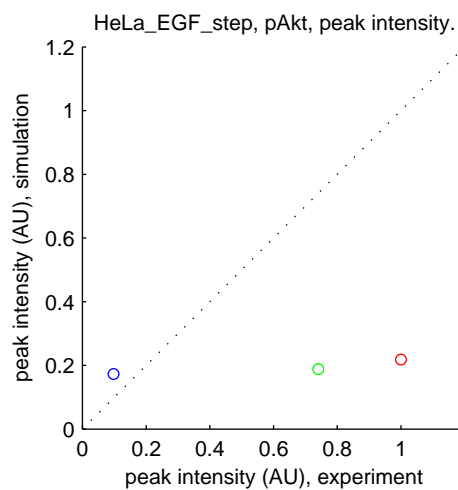
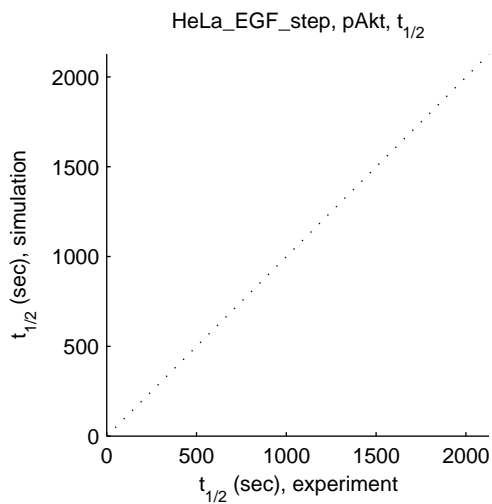
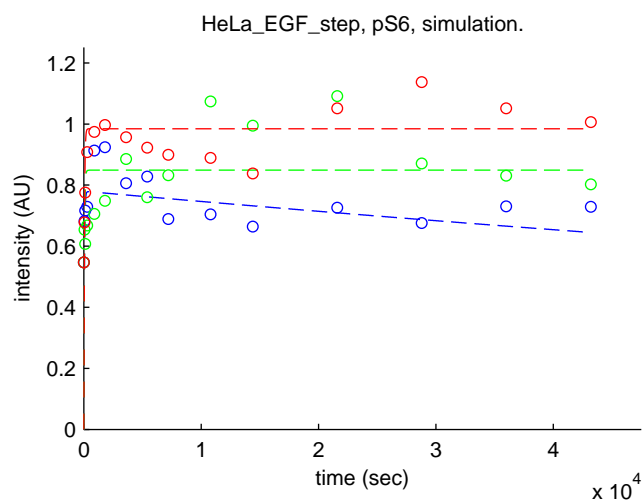
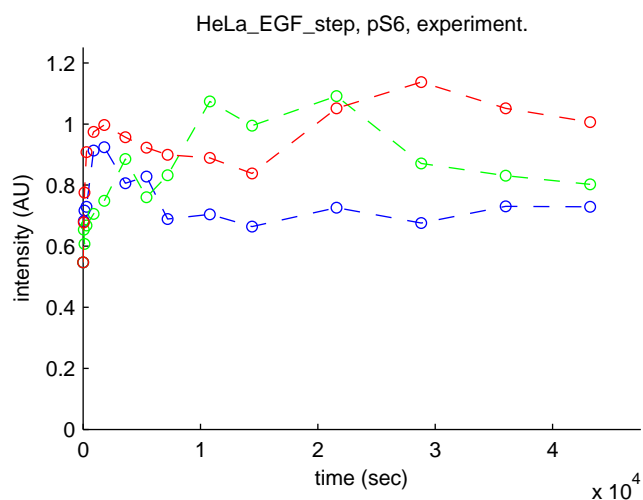
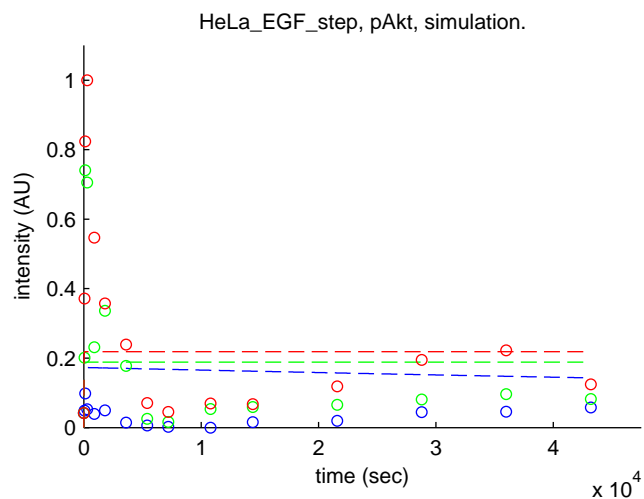
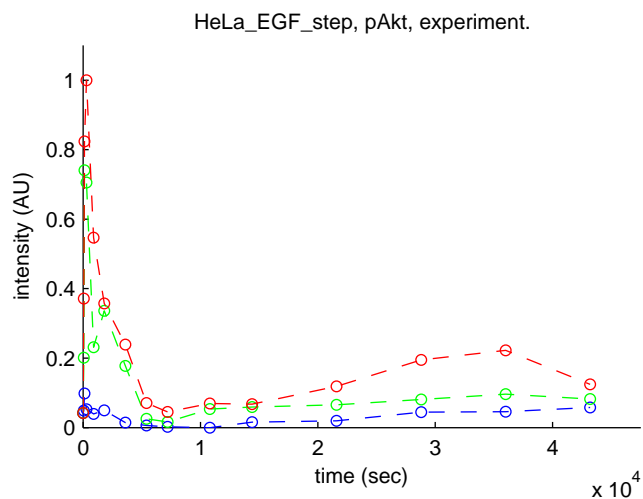


HeLa_EGF_step, pERK1, peak intensity.

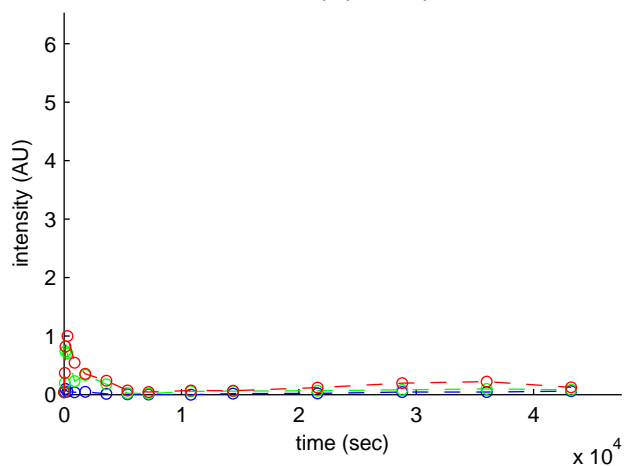


HeLa_EGF_step, pEGFR \rightarrow pERK1, Efficiency (E).

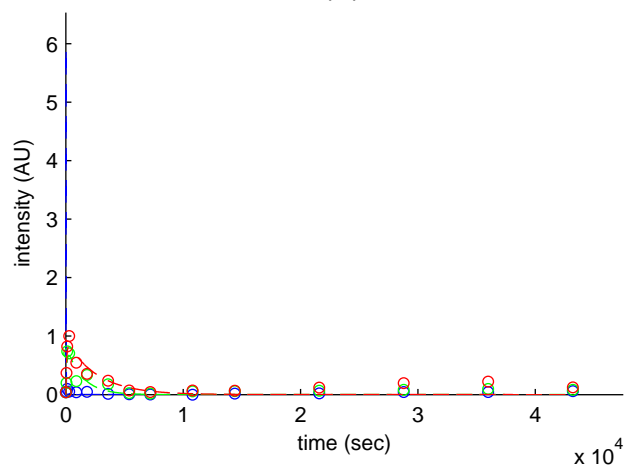




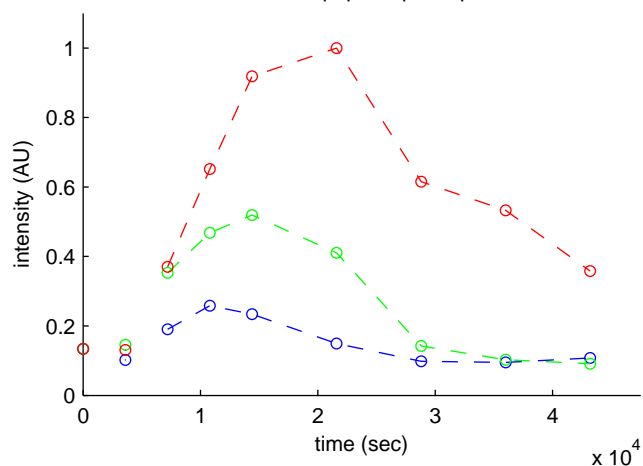
HeLa_EGF_step, pAkt, experiment.



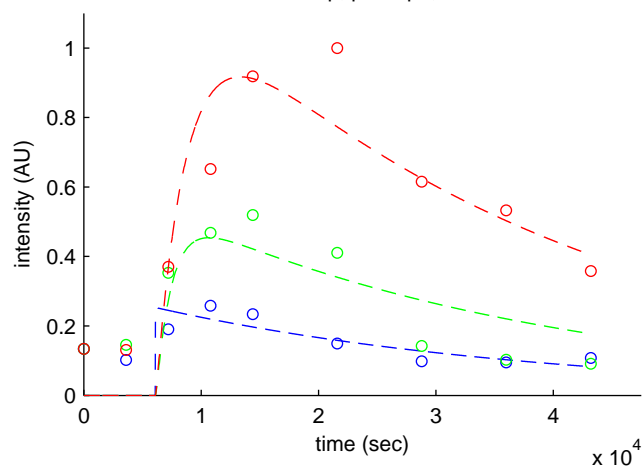
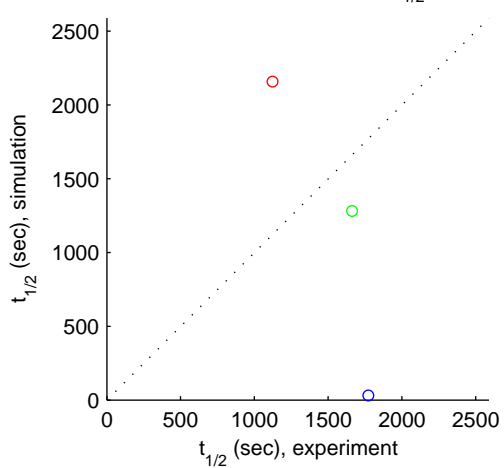
HeLa_EGF_step, pAkt, simulation.



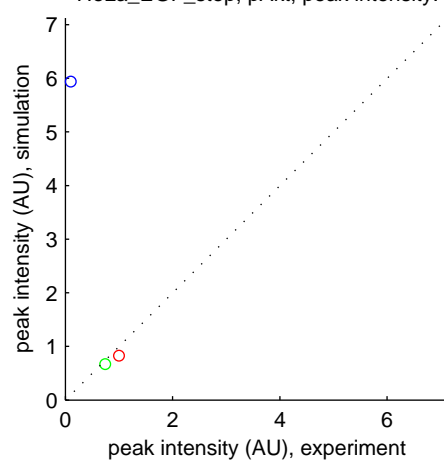
HeLa_EGF_step, p21Cip1, experiment.



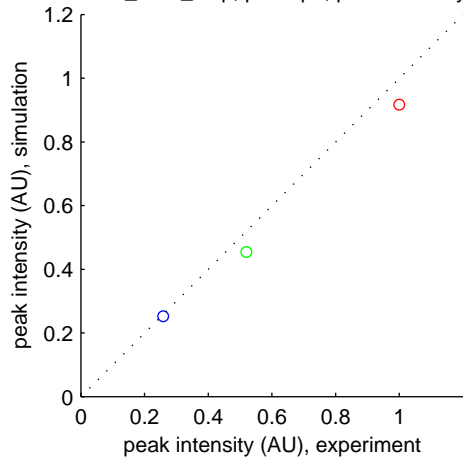
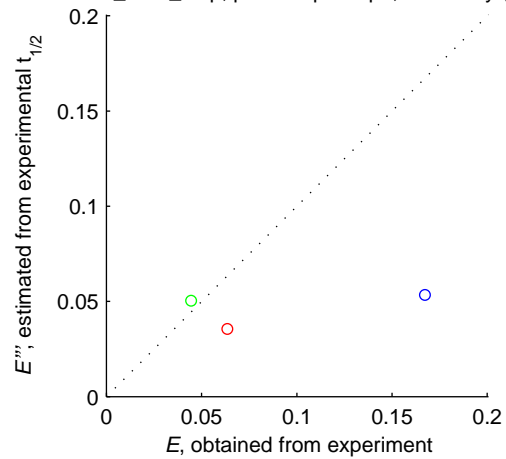
HeLa_EGF_step, p21Cip1, simulation.

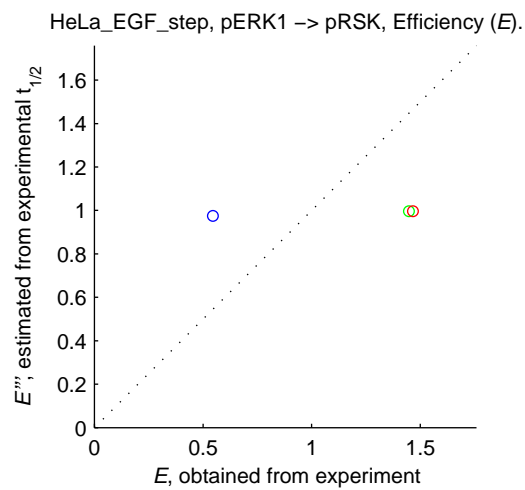
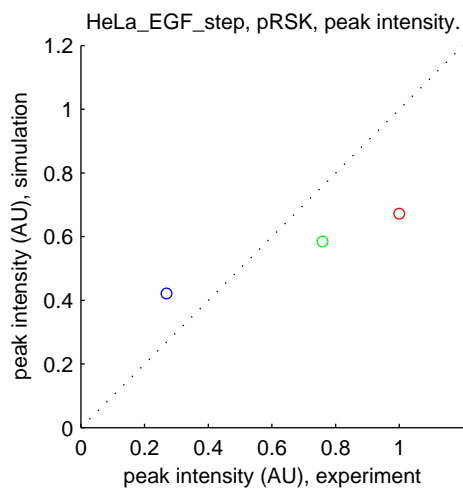
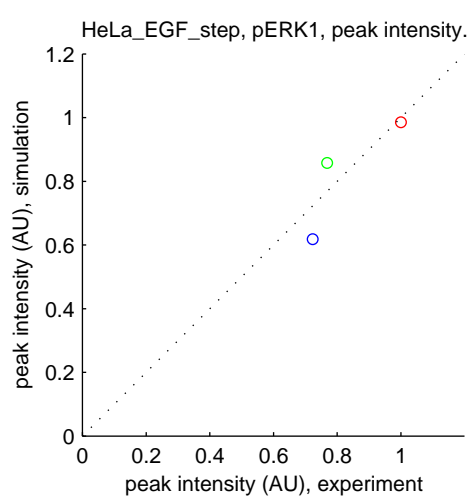
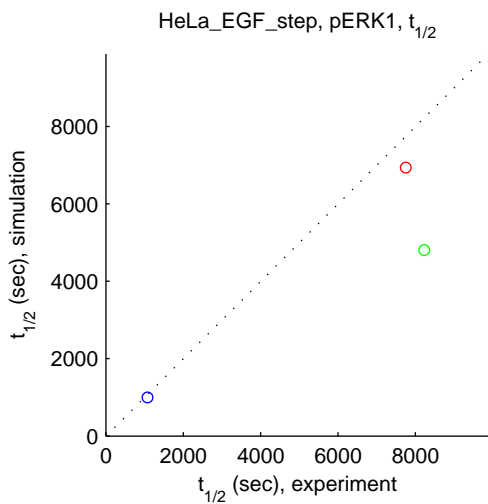
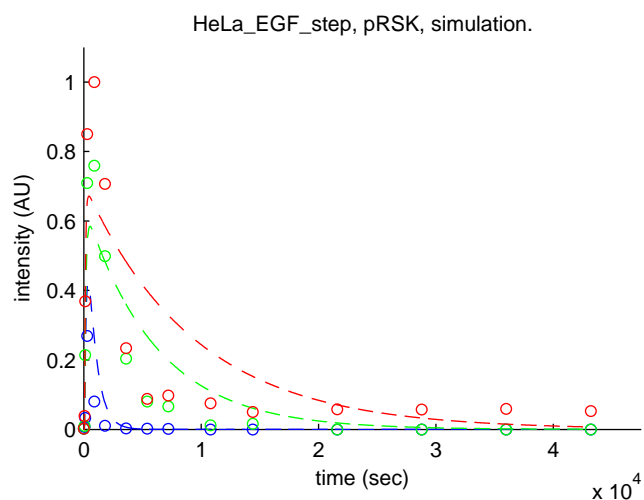
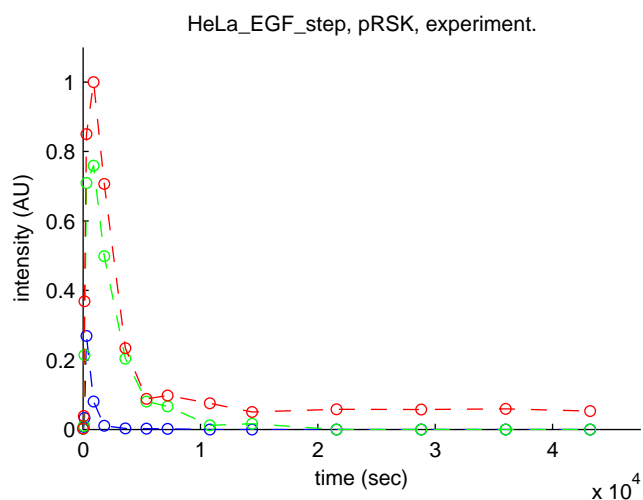
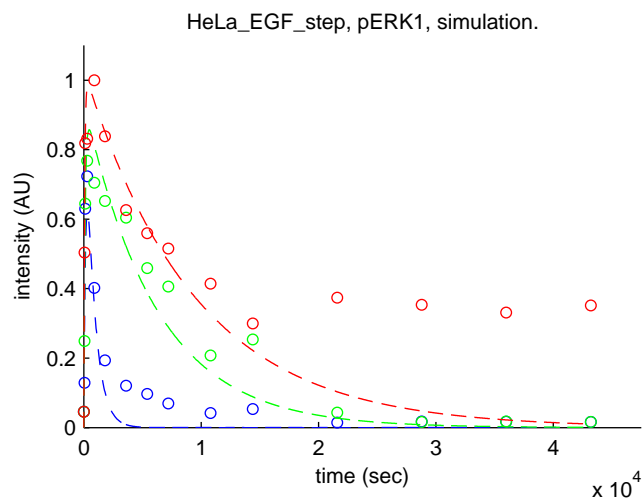
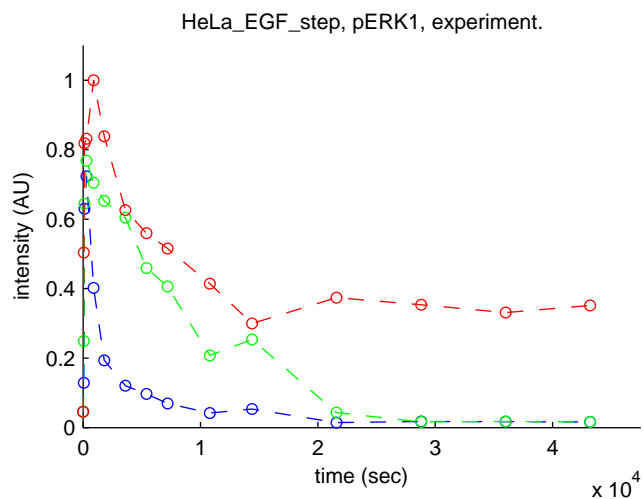
HeLa_EGF_step, pAkt, $t_{1/2}$ 

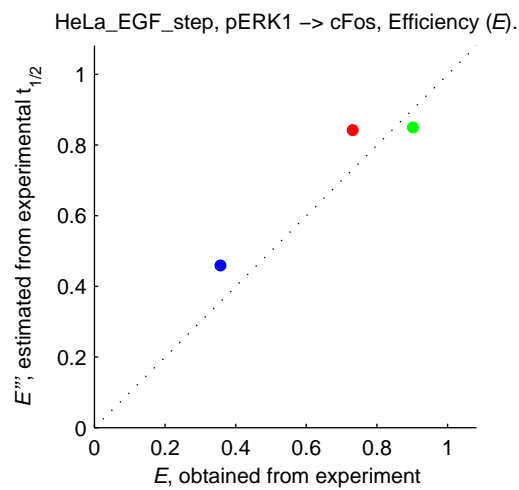
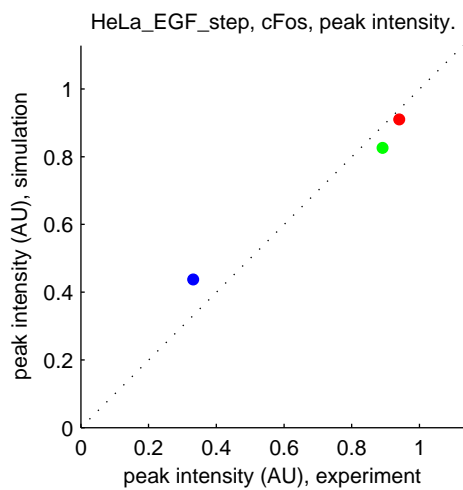
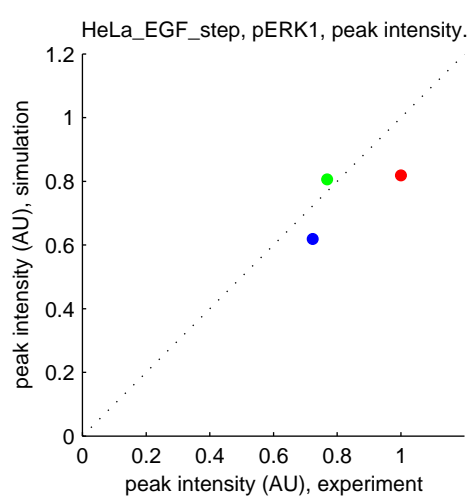
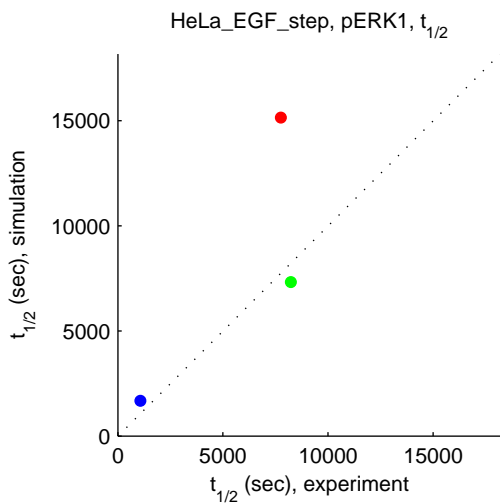
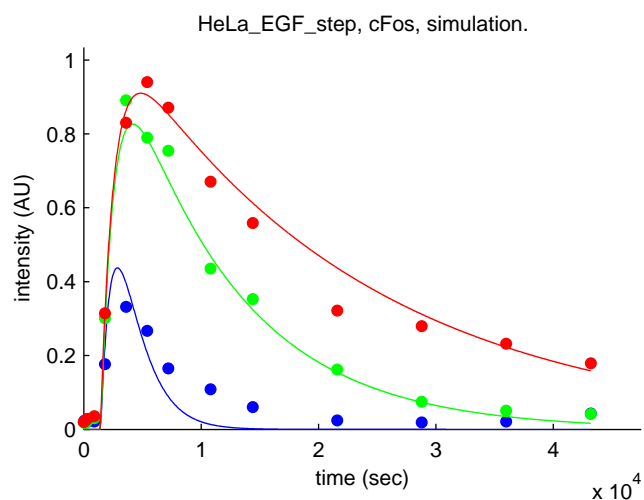
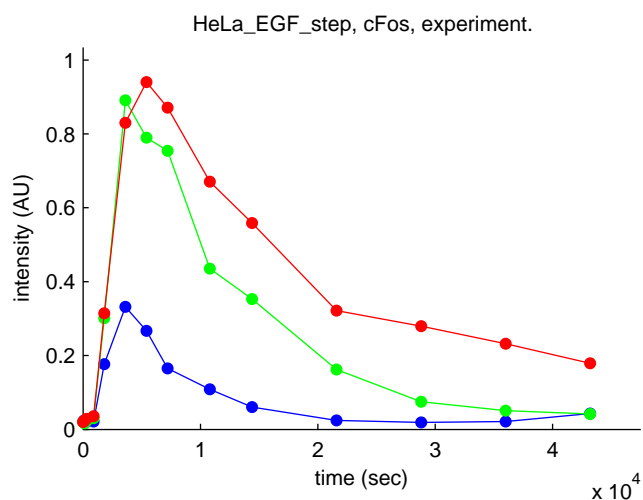
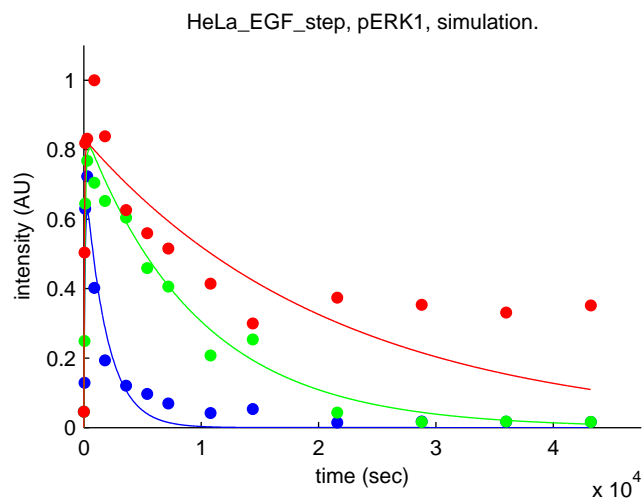
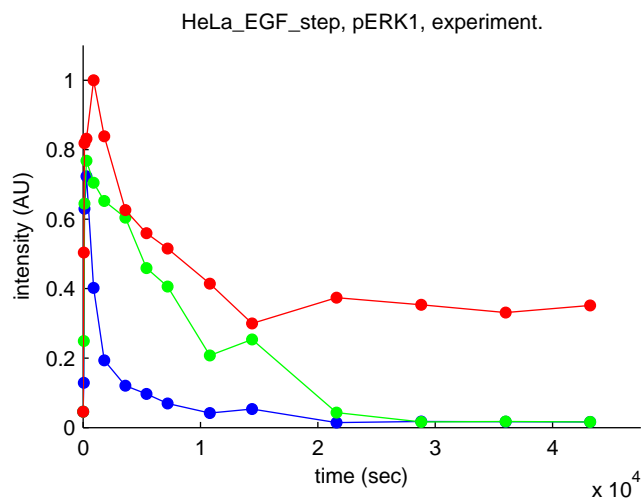
HeLa_EGF_step, pAkt, peak intensity.

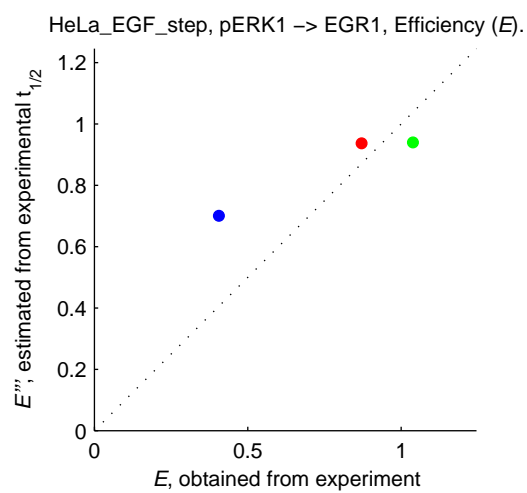
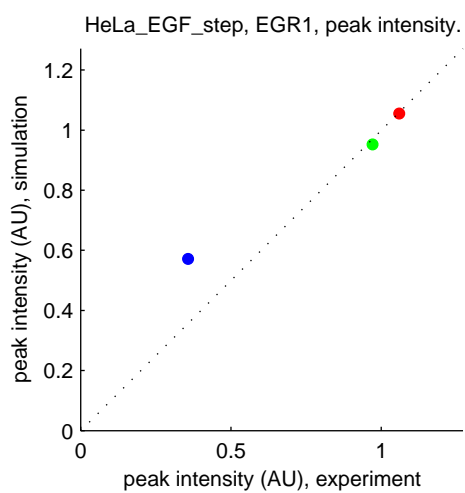
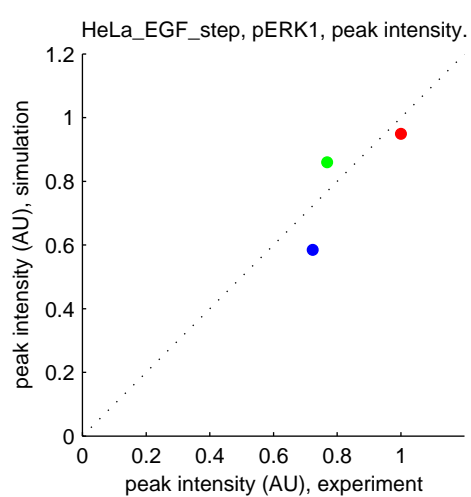
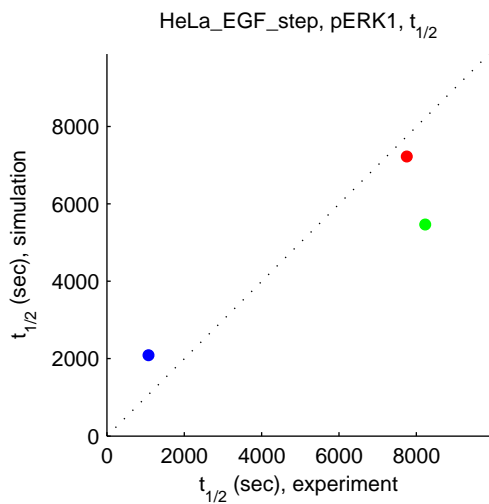
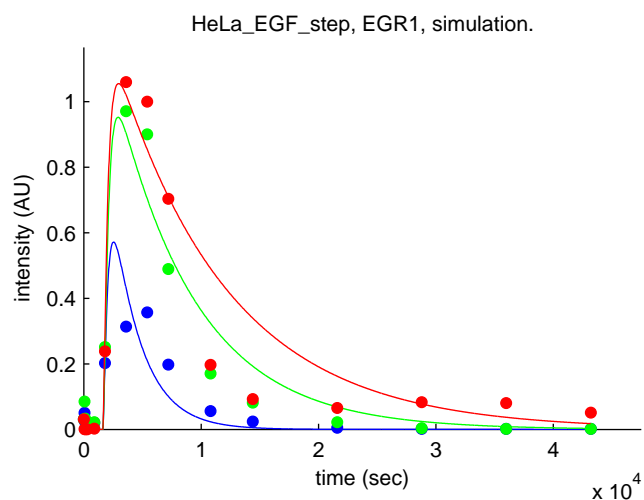
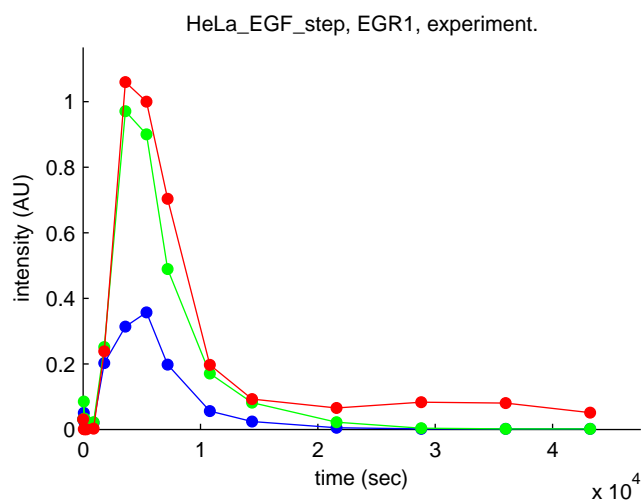
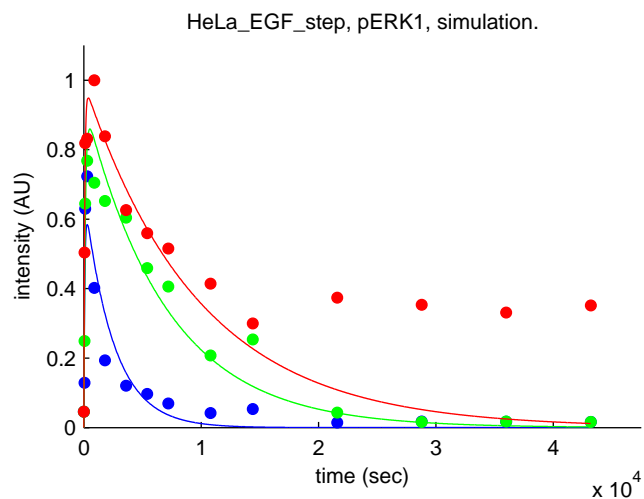
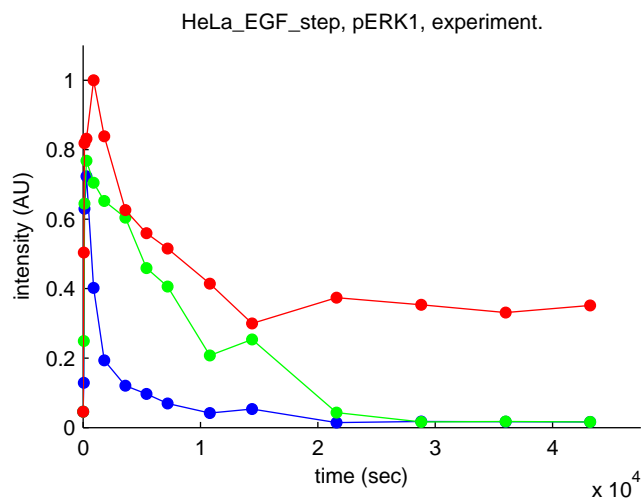


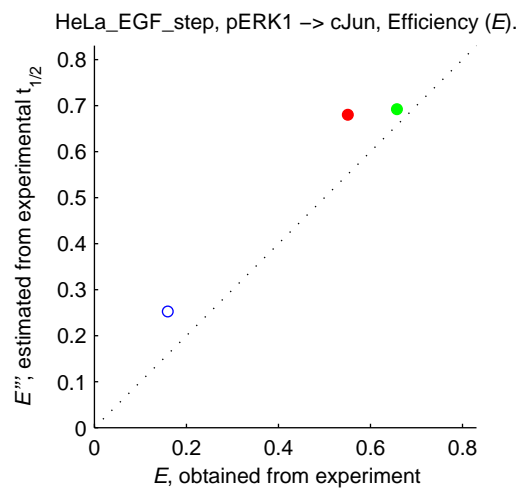
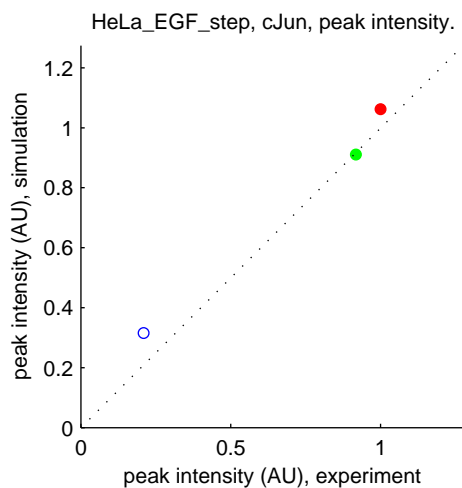
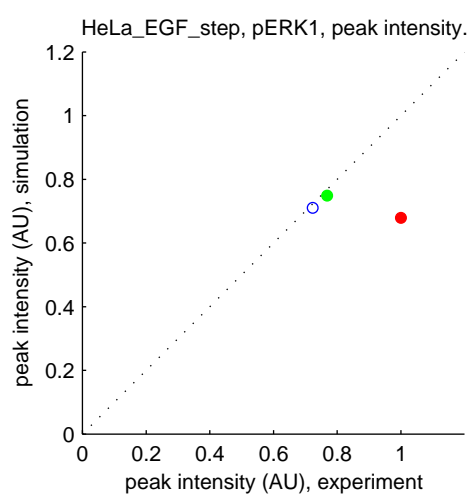
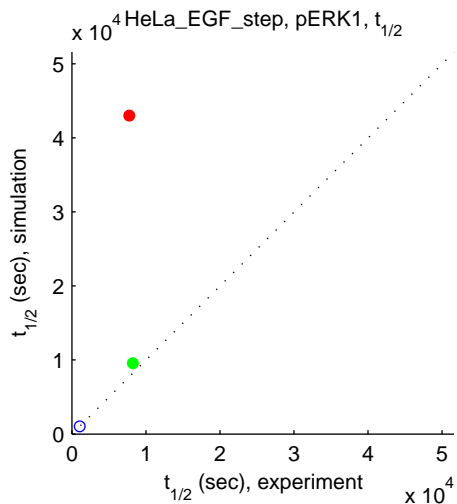
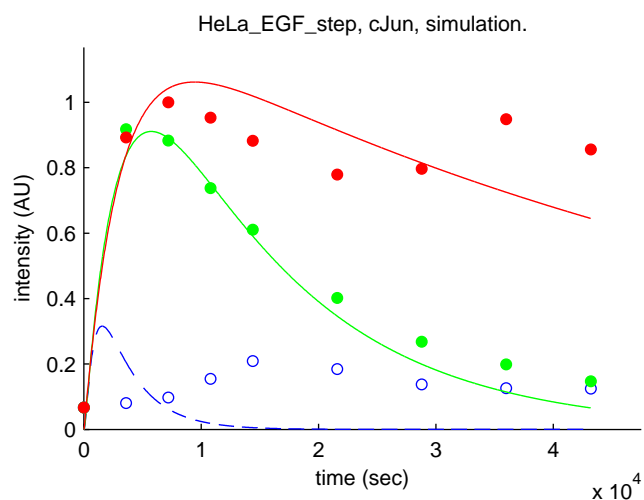
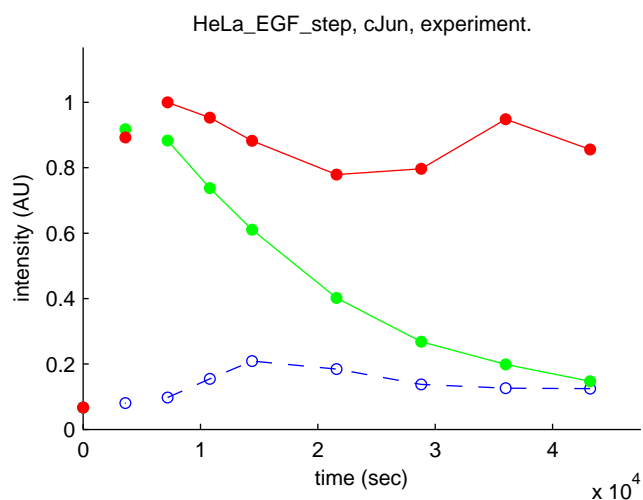
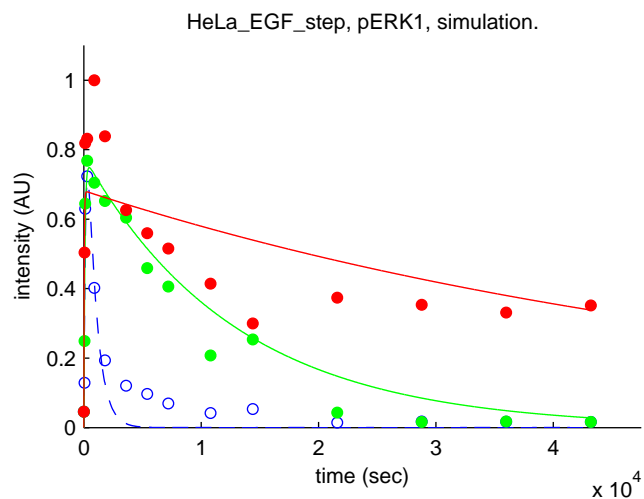
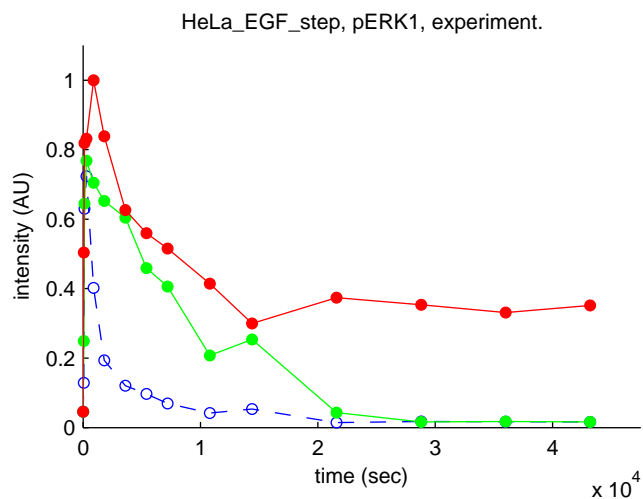
HeLa_EGF_step, p21Cip1, peak intensity.

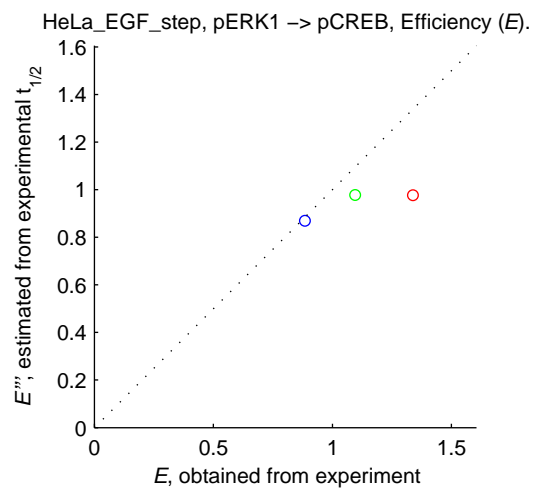
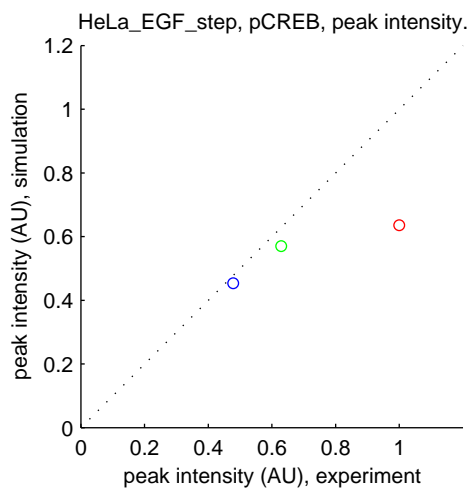
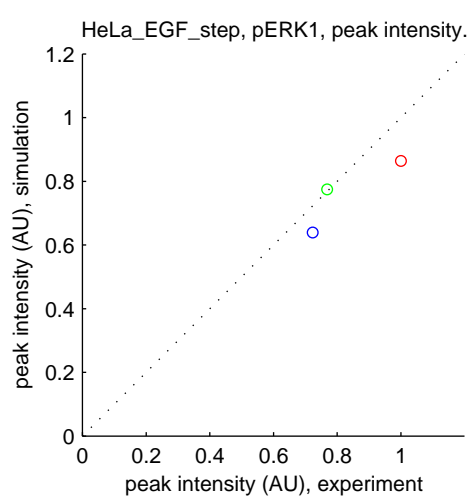
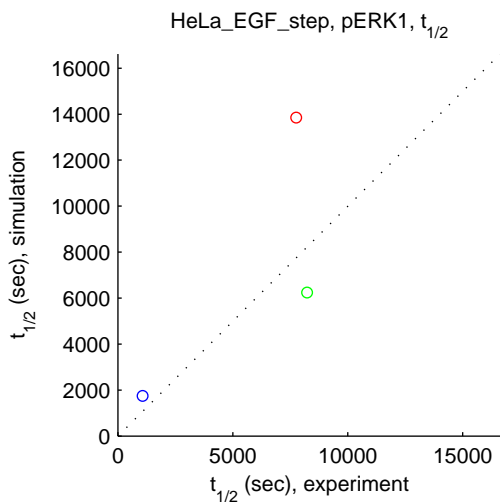
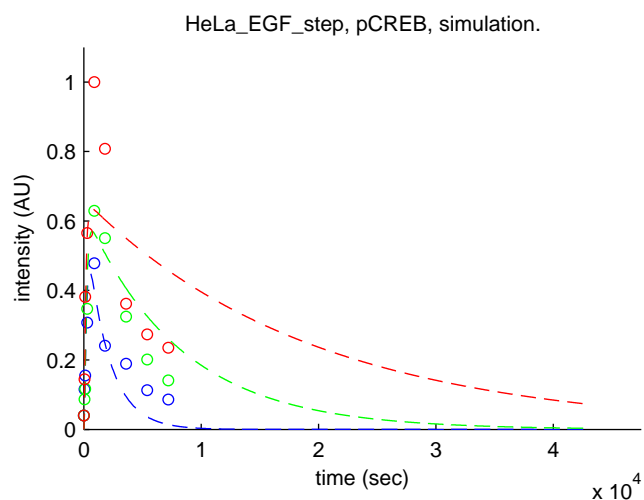
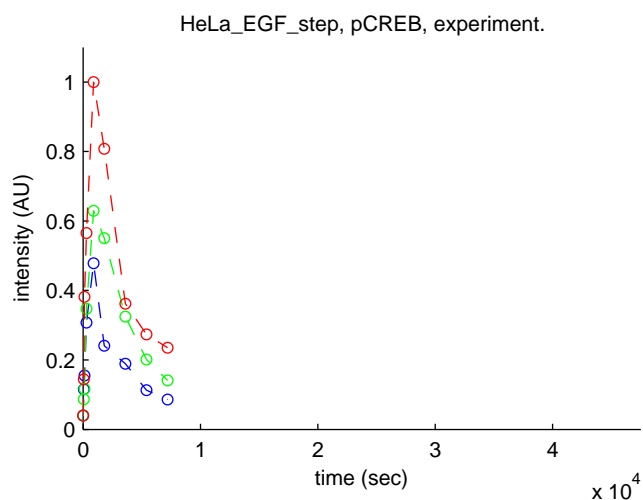
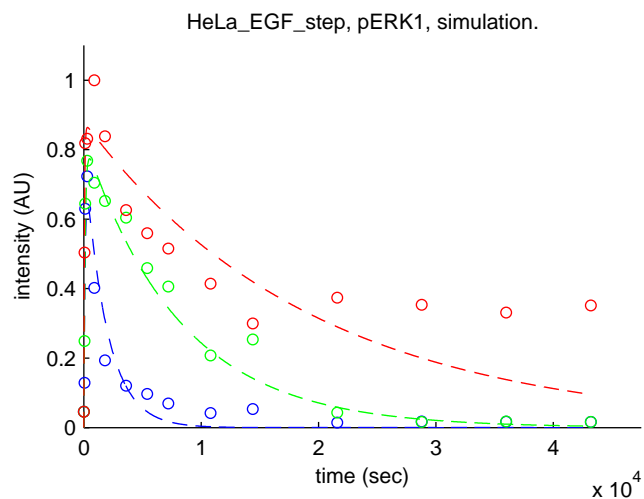
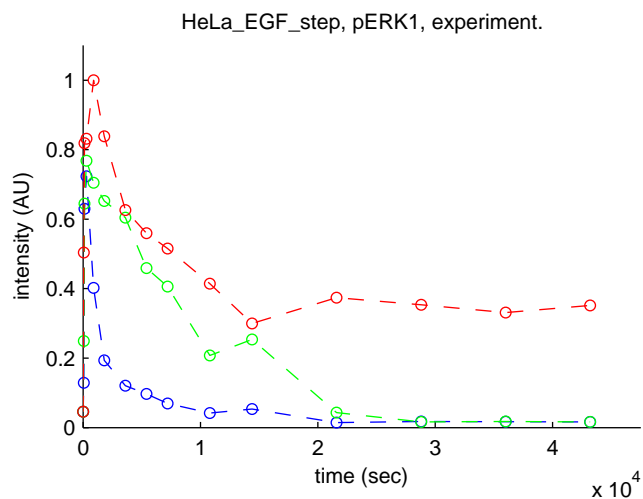
HeLa_EGF_step, pAkt \rightarrow p21Cip1, Efficiency (E).

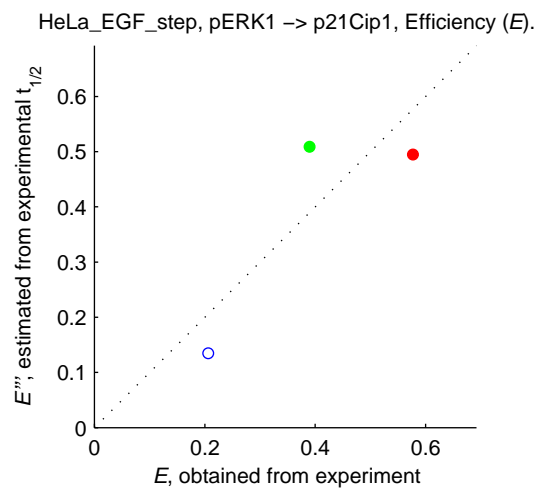
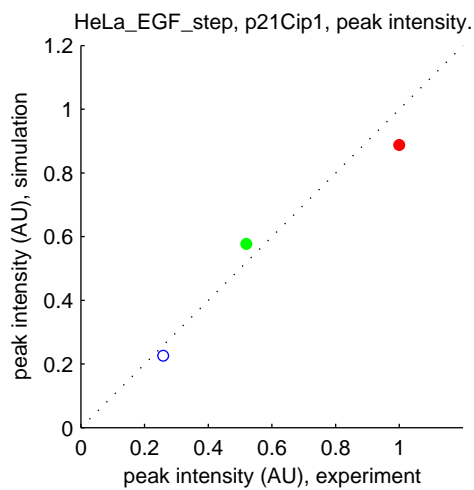
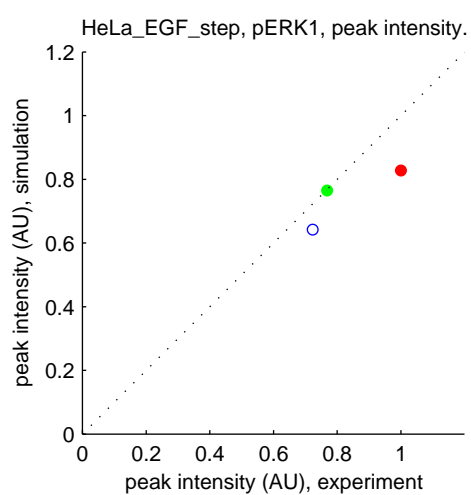
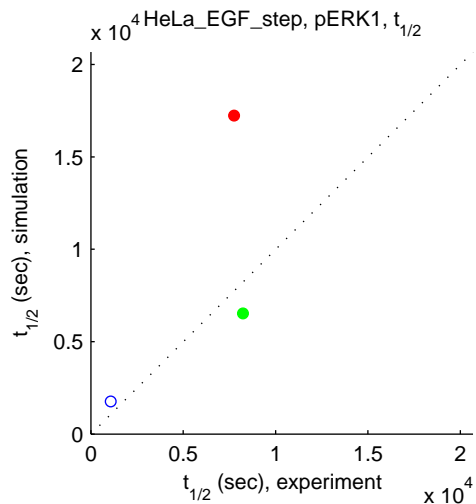
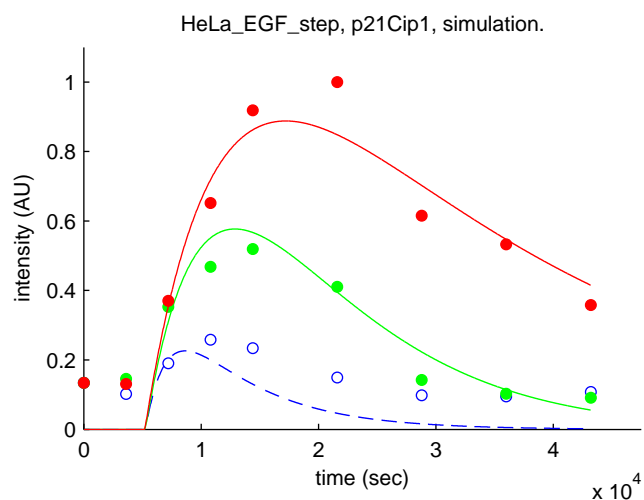
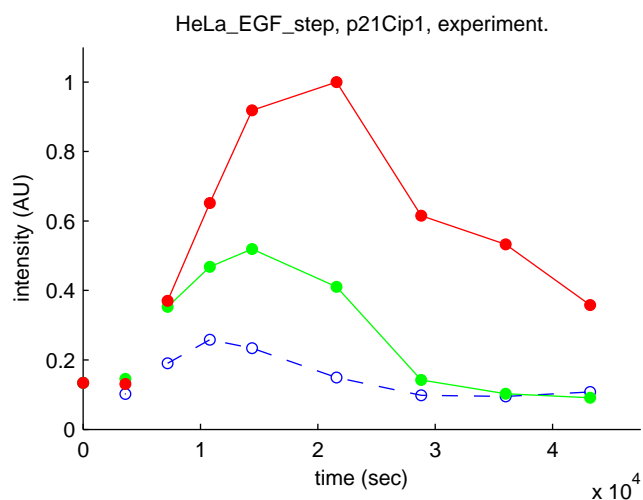
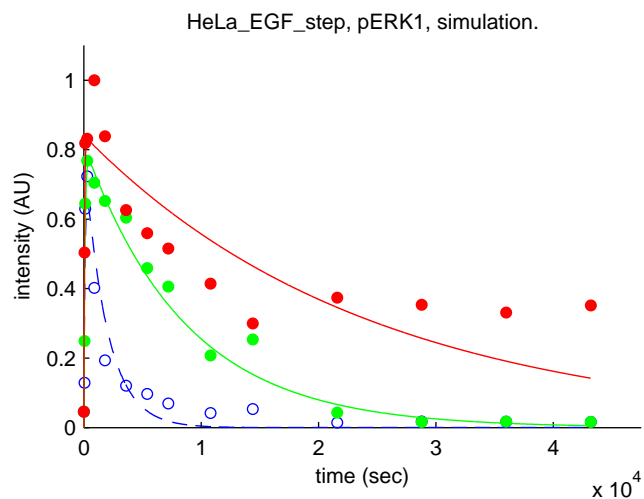
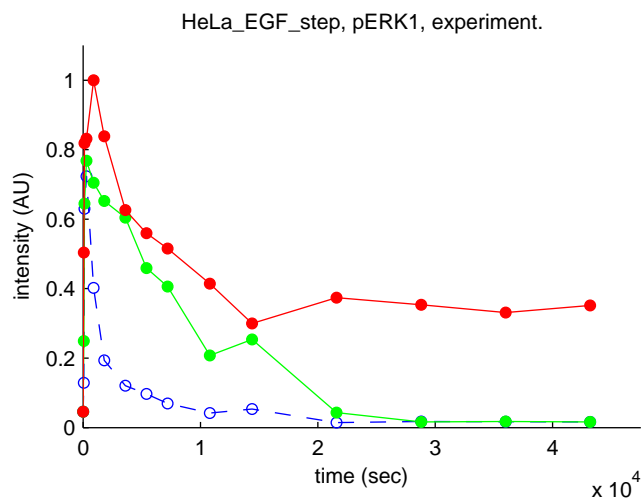




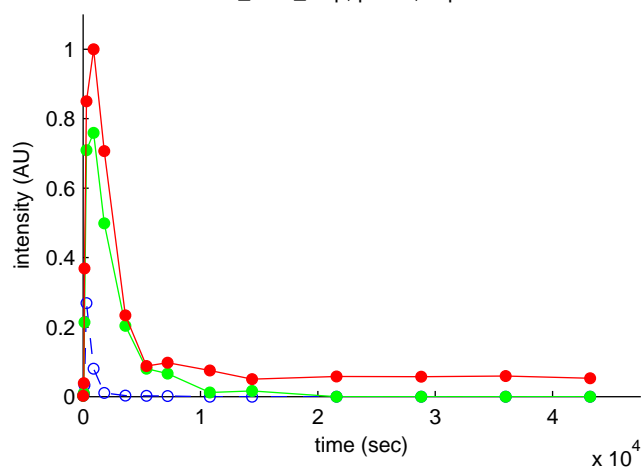




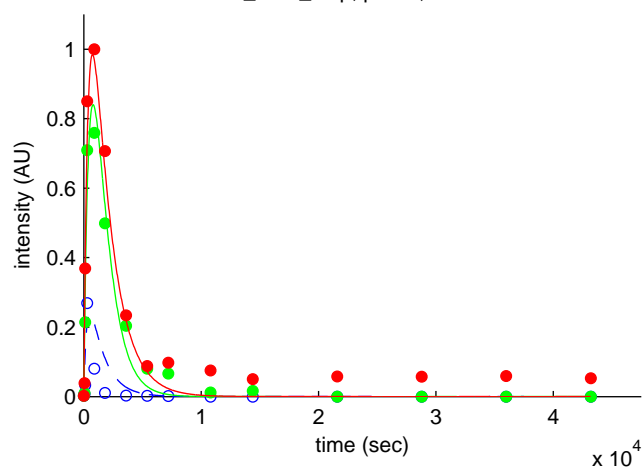




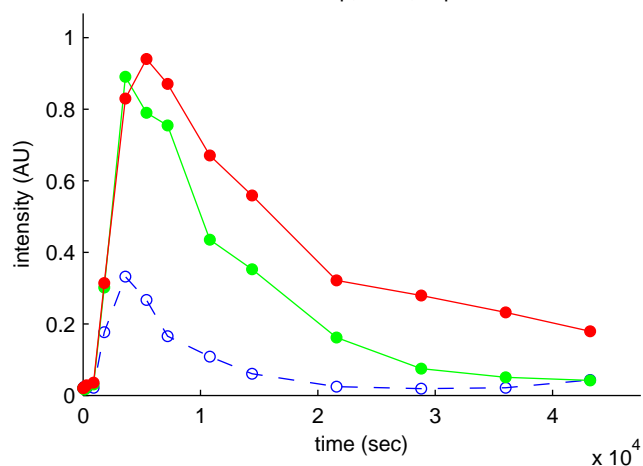
HeLa_EGF_step, pRSK, experiment.



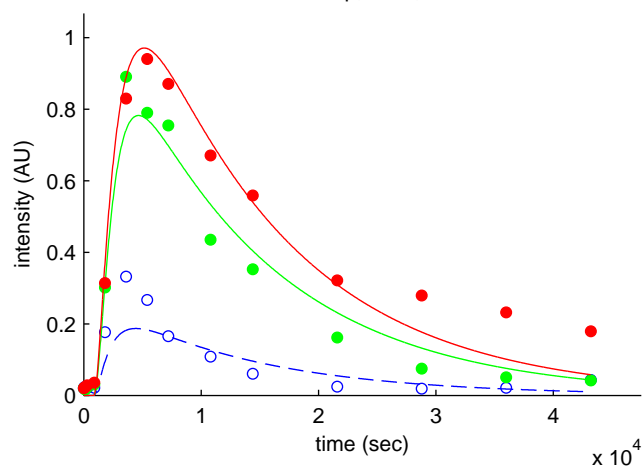
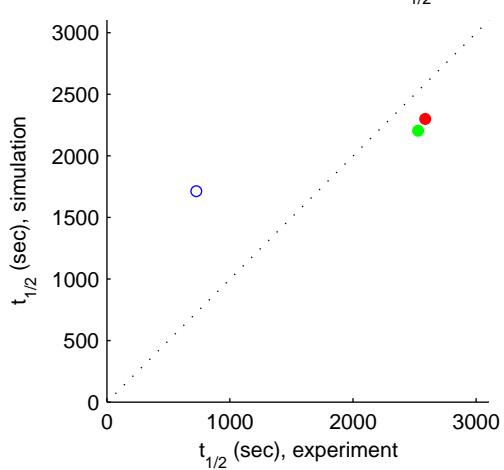
HeLa_EGF_step, pRSK, simulation.



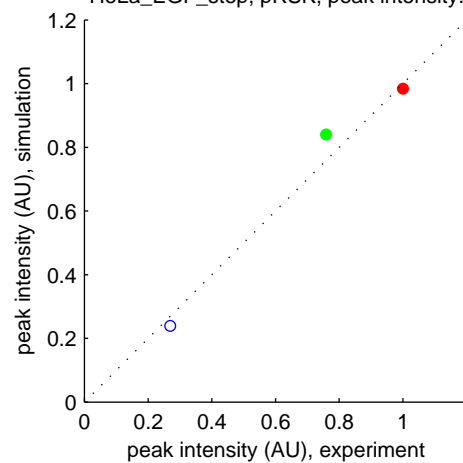
HeLa_EGF_step, cFos, experiment.



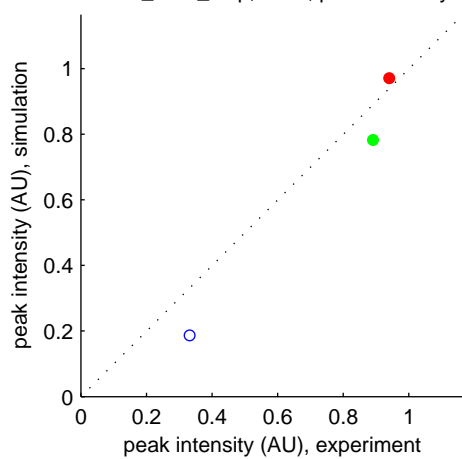
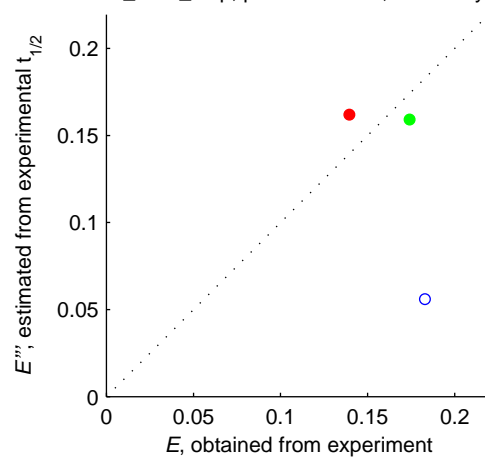
HeLa_EGF_step, cFos, simulation.

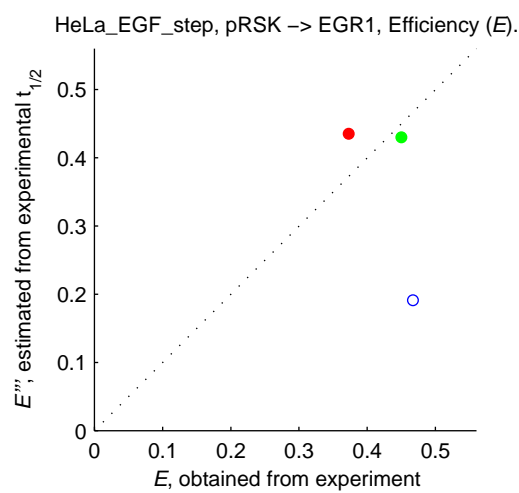
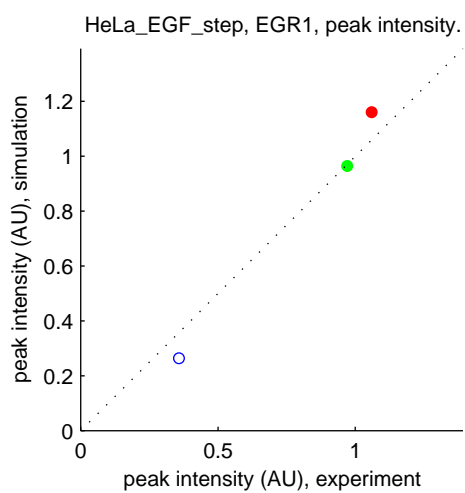
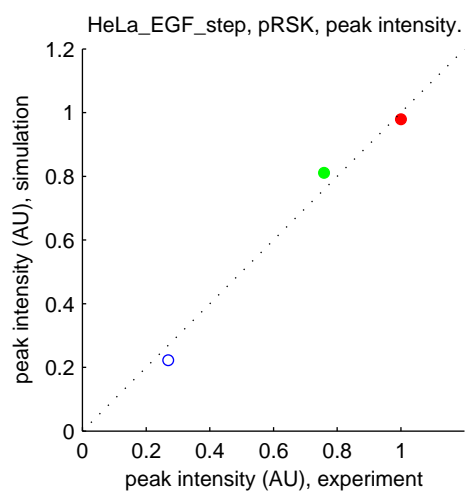
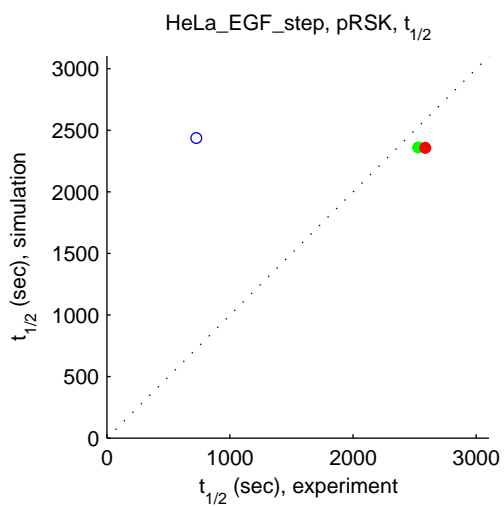
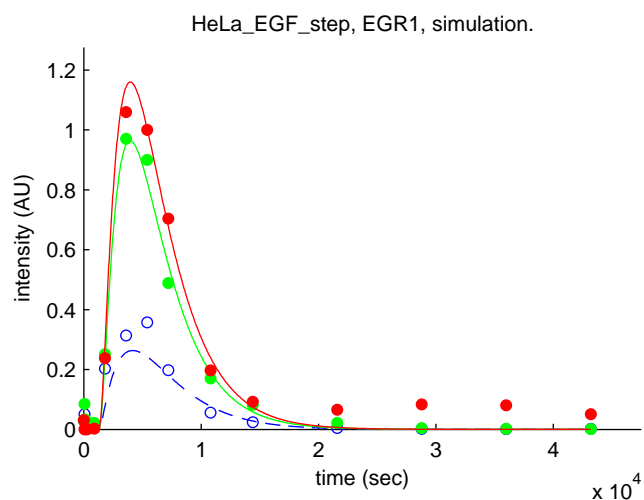
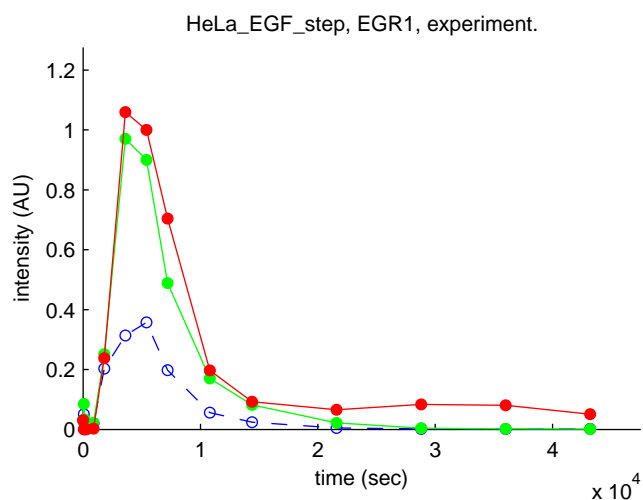
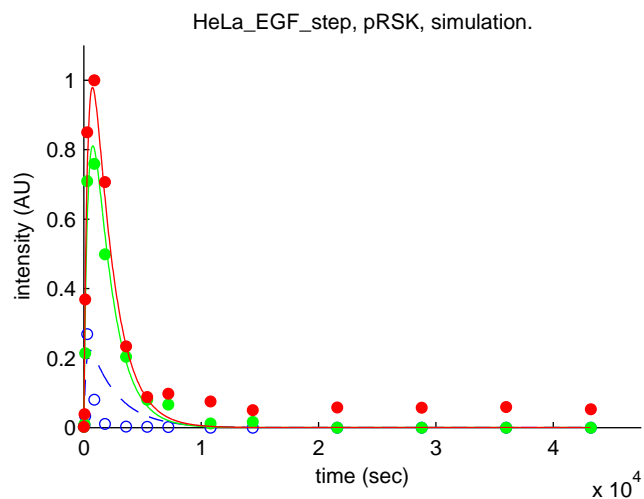
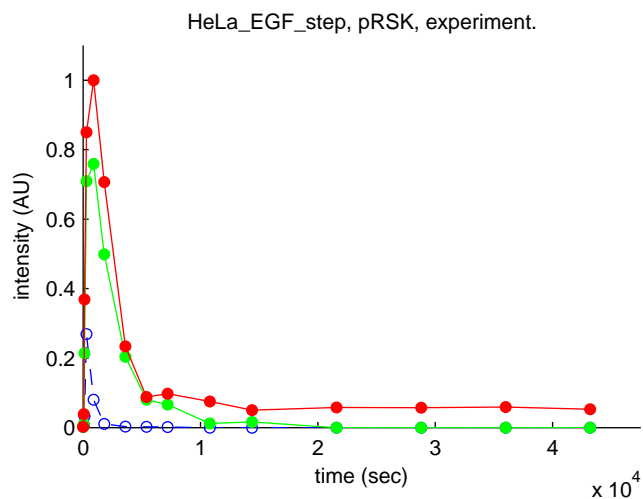
HeLa_EGF_step, pRSK, $t_{1/2}$ 

HeLa_EGF_step, pRSK, peak intensity.

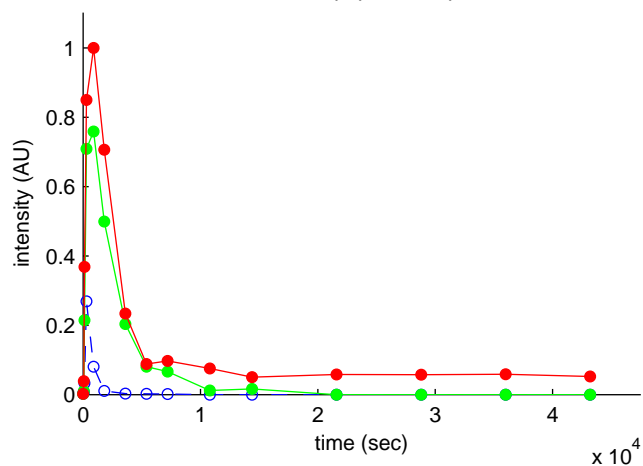


HeLa_EGF_step, cFos, peak intensity.

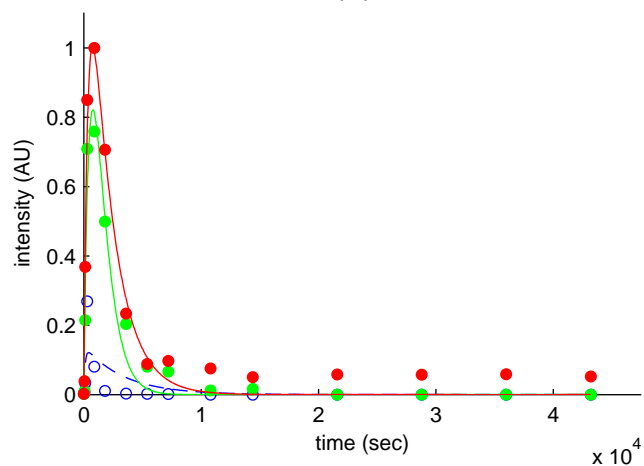
HeLa_EGF_step, pRSK \rightarrow cFos, Efficiency (E).



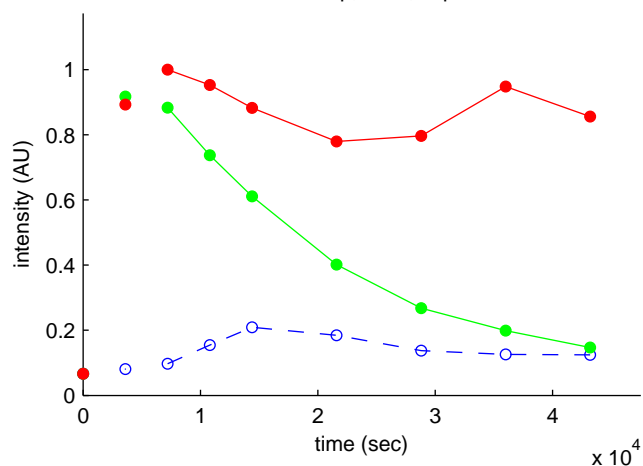
HeLa_EGF_step, pRSK, experiment.



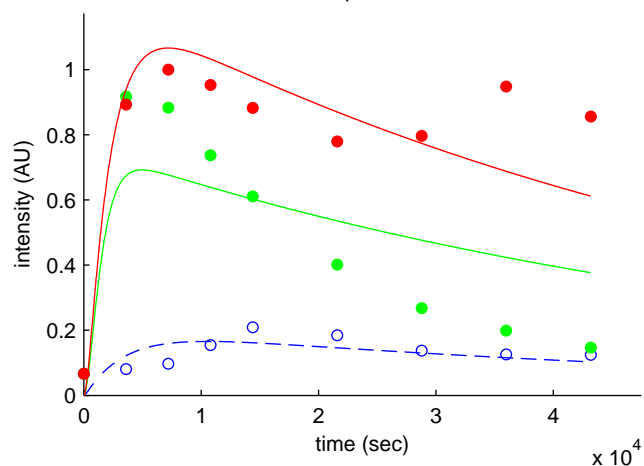
HeLa_EGF_step, pRSK, simulation.



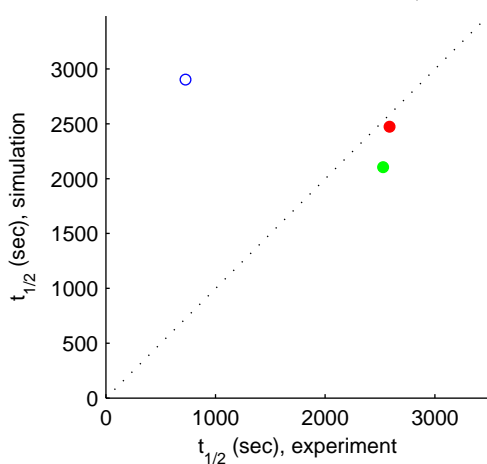
HeLa_EGF_step, cJun, experiment.



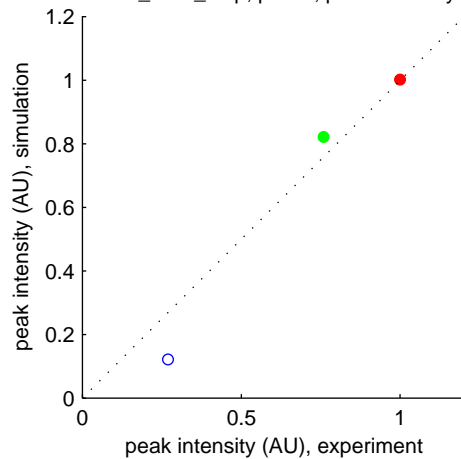
HeLa_EGF_step, cJun, simulation.



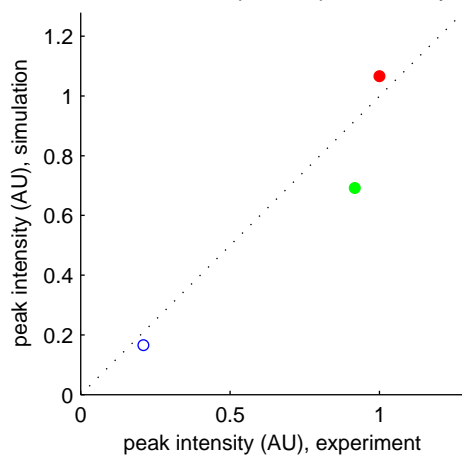
HeLa_EGF_step, pRSK, $t_{1/2}$



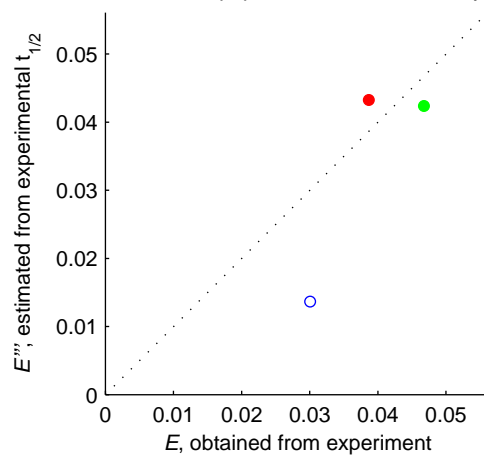
HeLa_EGF_step, pRSK, peak intensity.



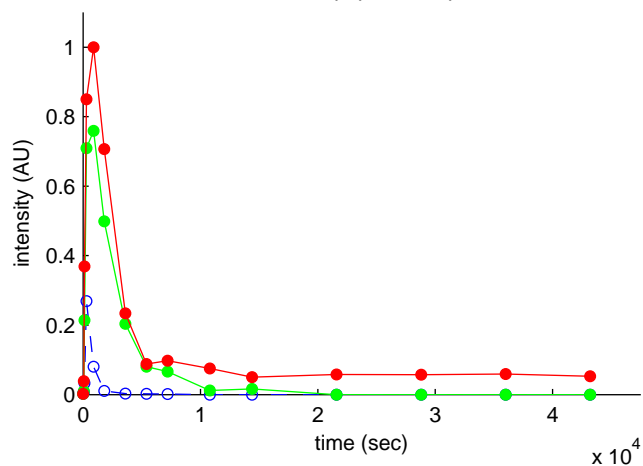
HeLa_EGF_step, cJun, peak intensity.



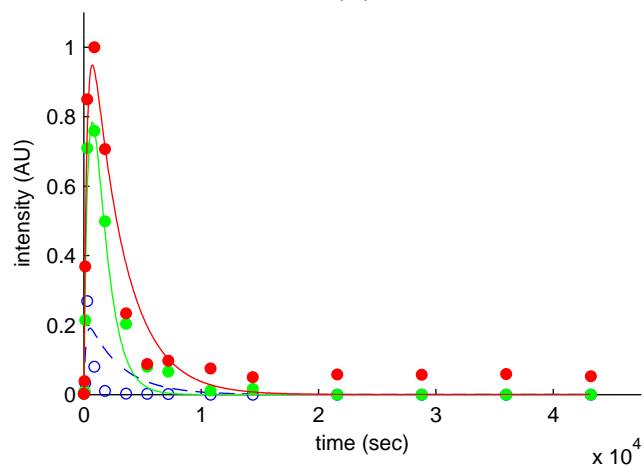
HeLa_EGF_step, pRSK \rightarrow cJun, Efficiency (E).



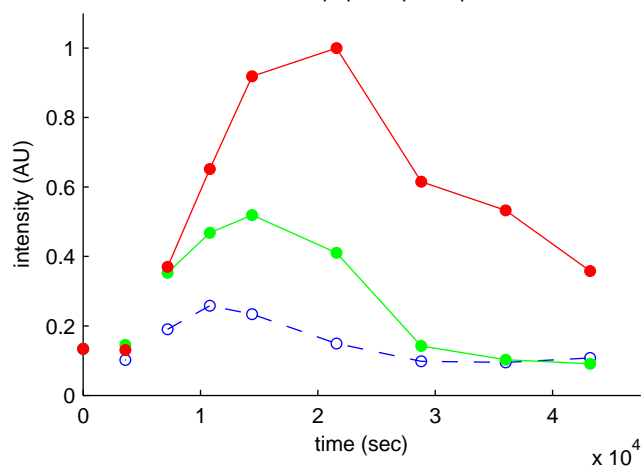
HeLa_EGF_step, pRSK, experiment.



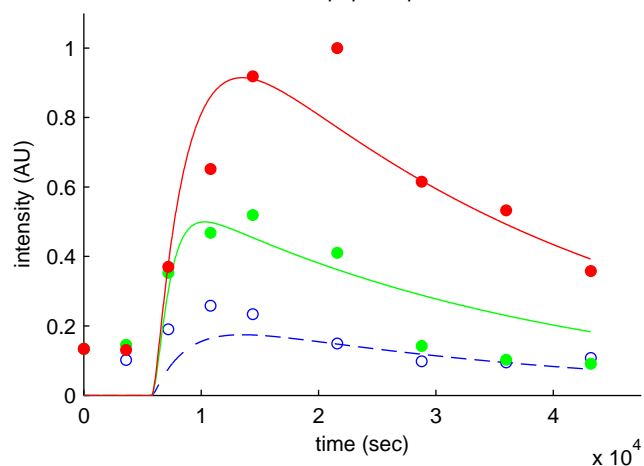
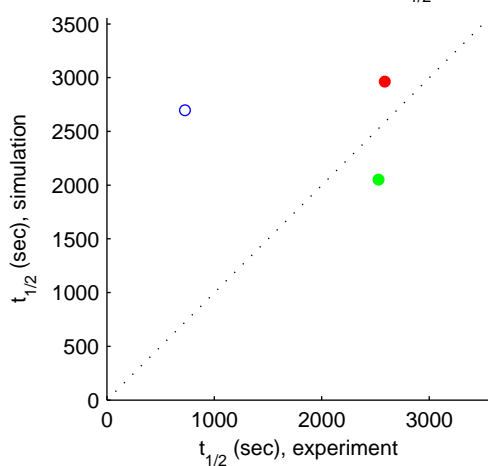
HeLa_EGF_step, pRSK, simulation.



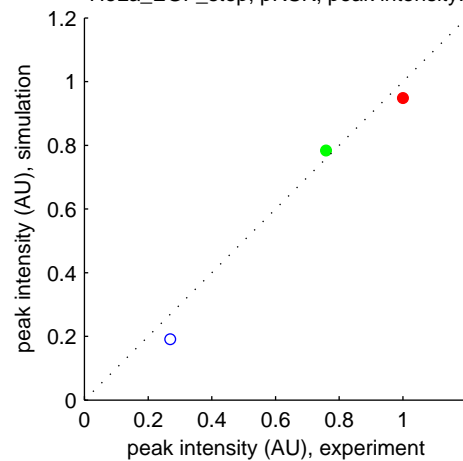
HeLa_EGF_step, p21Cip1, experiment.



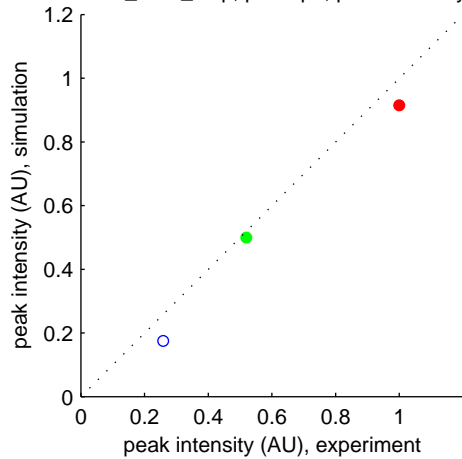
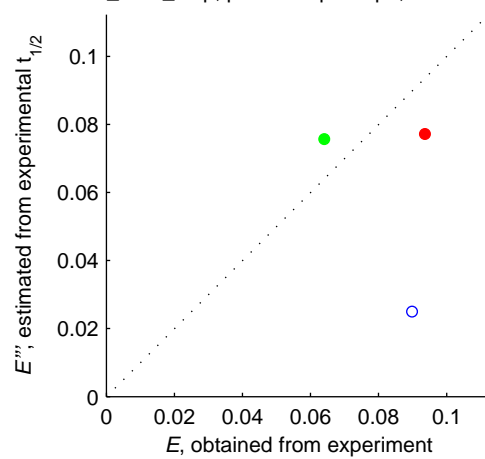
HeLa_EGF_step, p21Cip1, simulation.

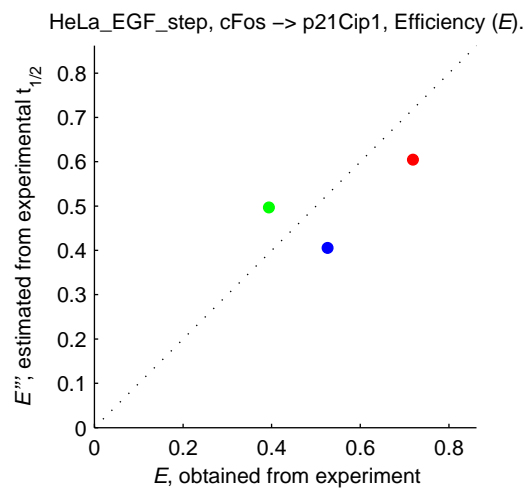
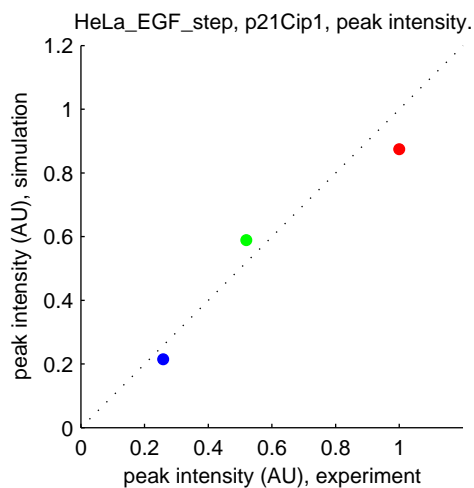
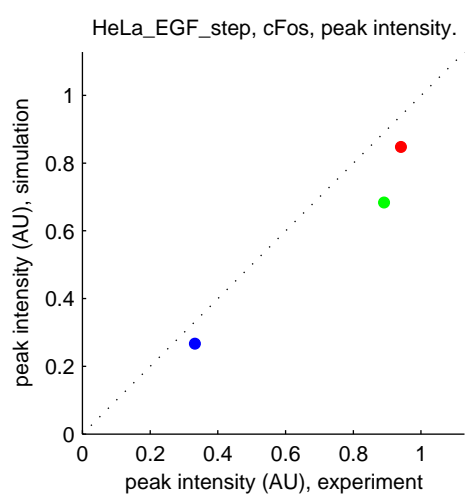
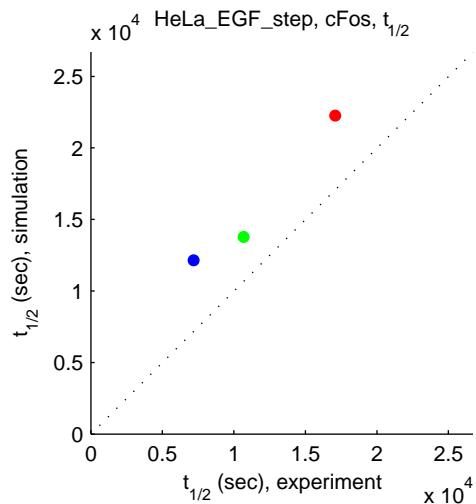
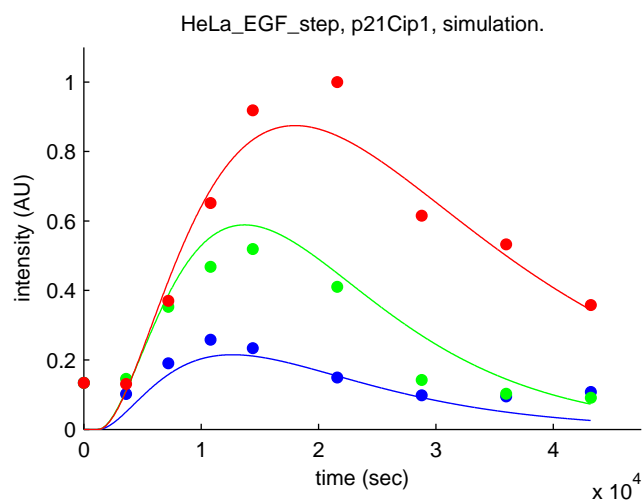
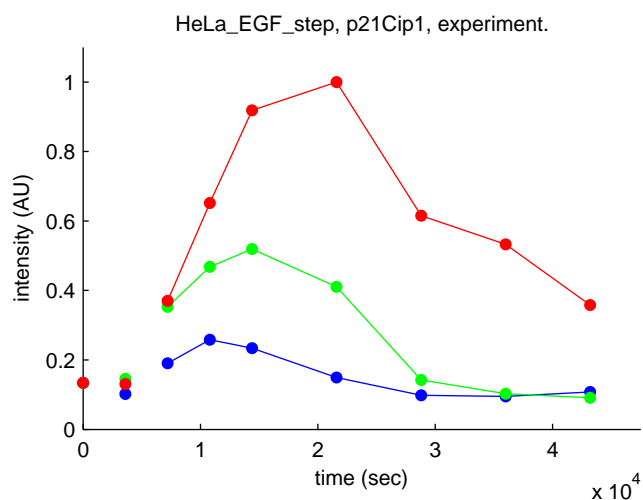
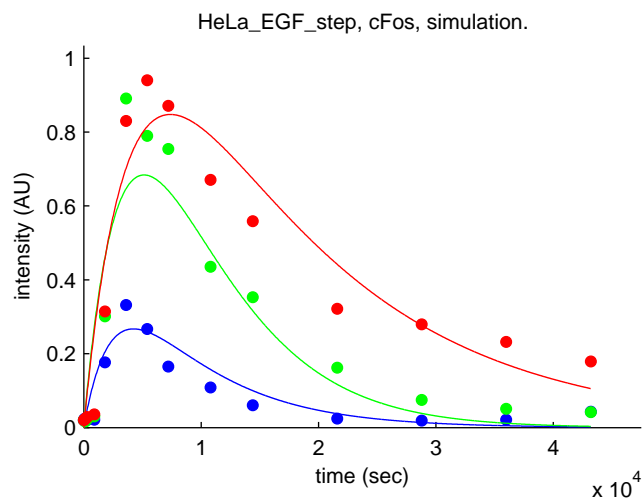
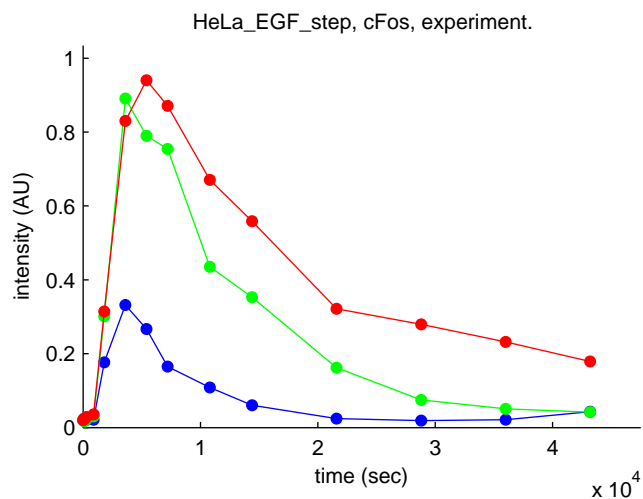
HeLa_EGF_step, pRSK, $t_{1/2}$ 

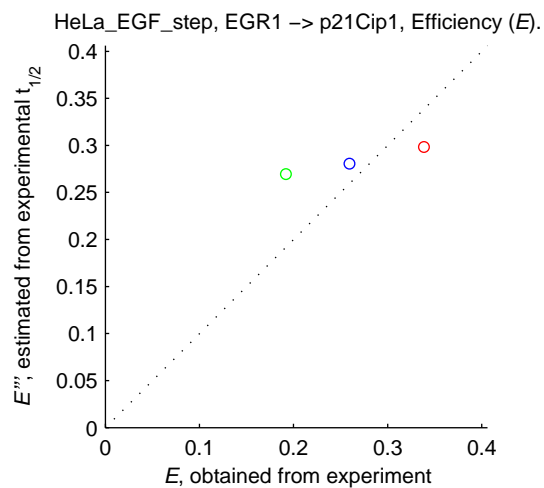
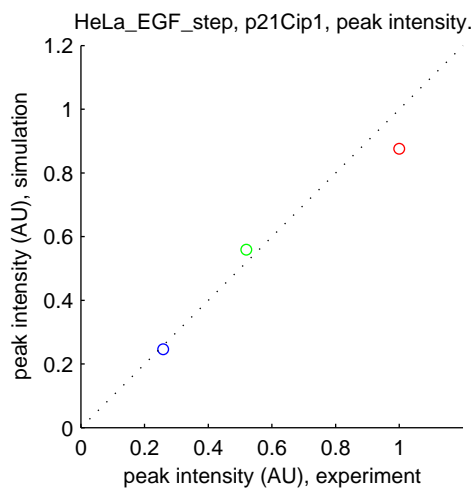
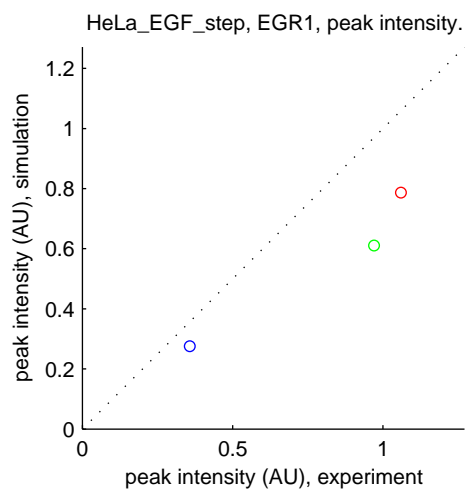
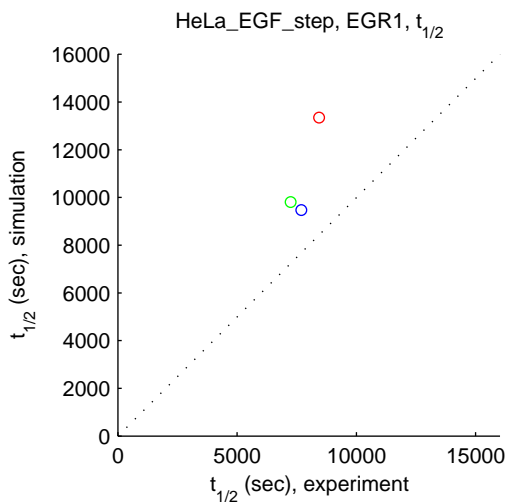
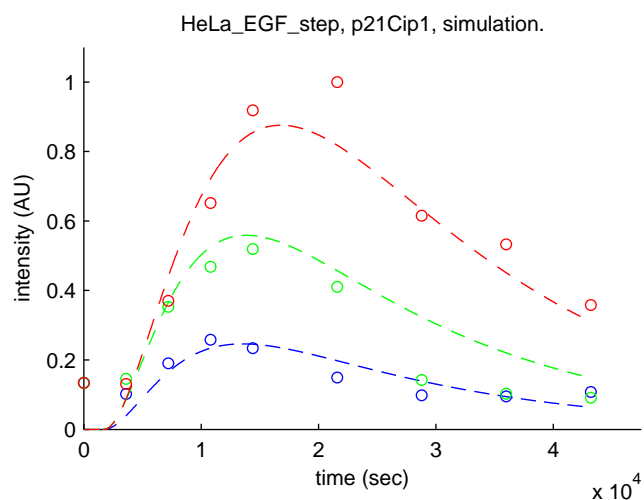
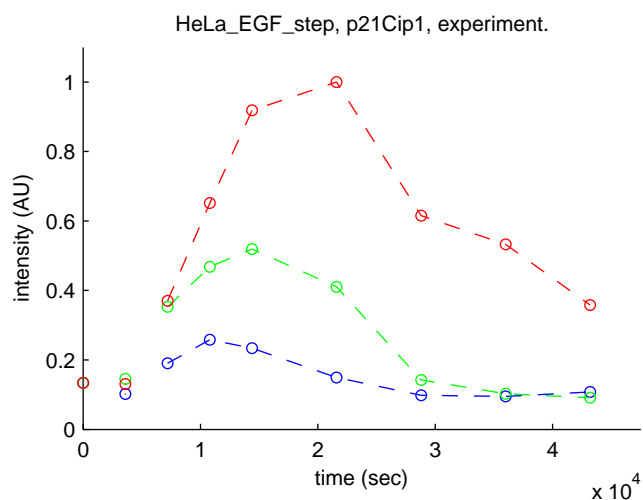
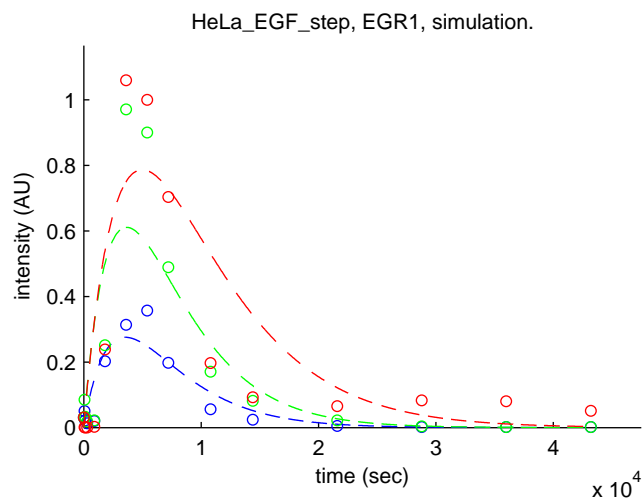
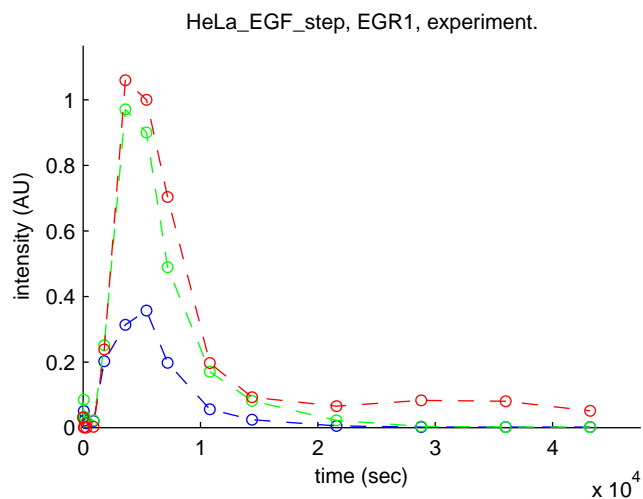
HeLa_EGF_step, pRSK, peak intensity.

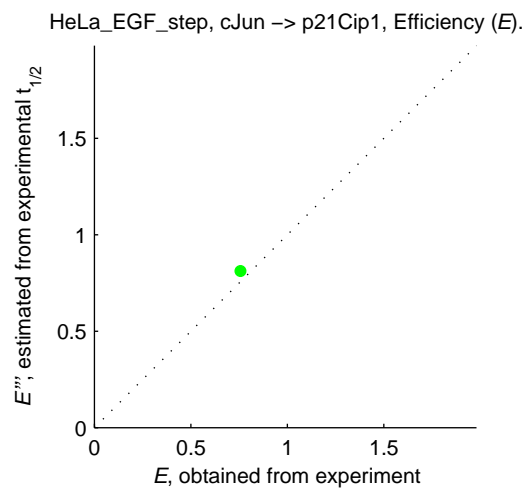
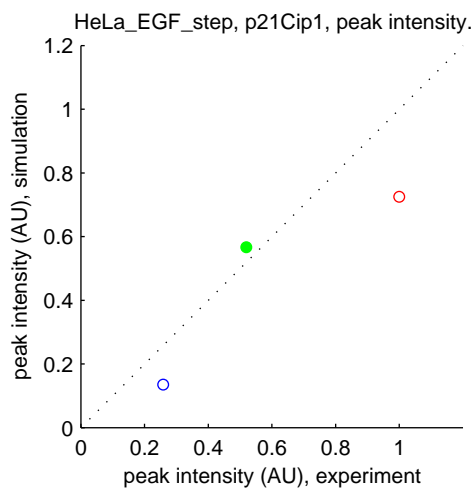
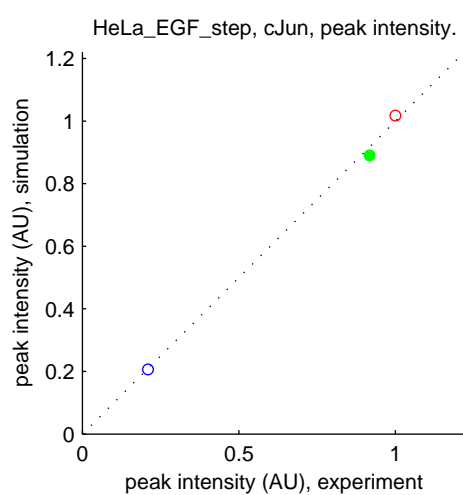
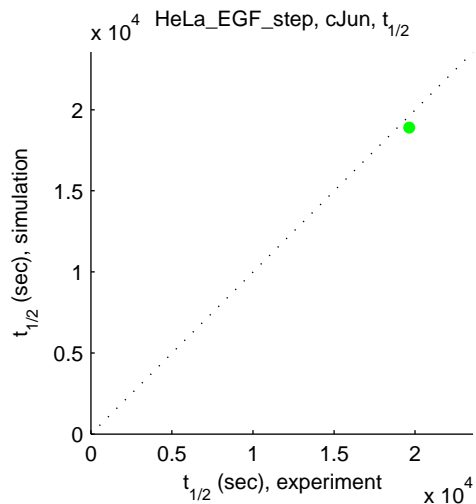
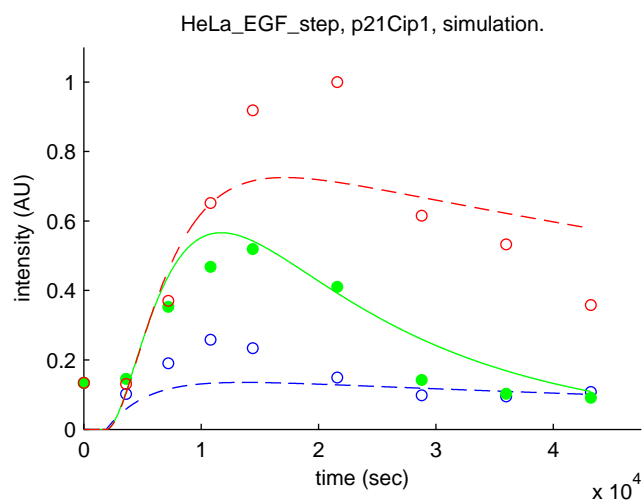
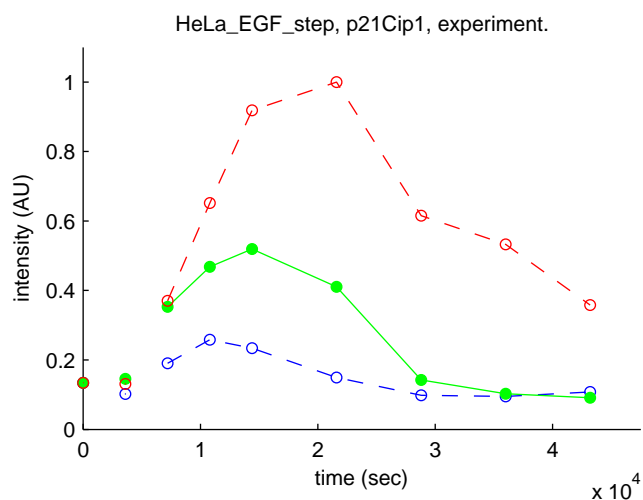
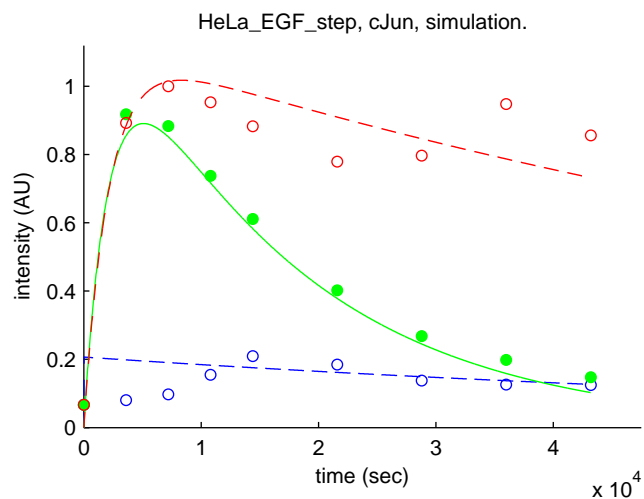
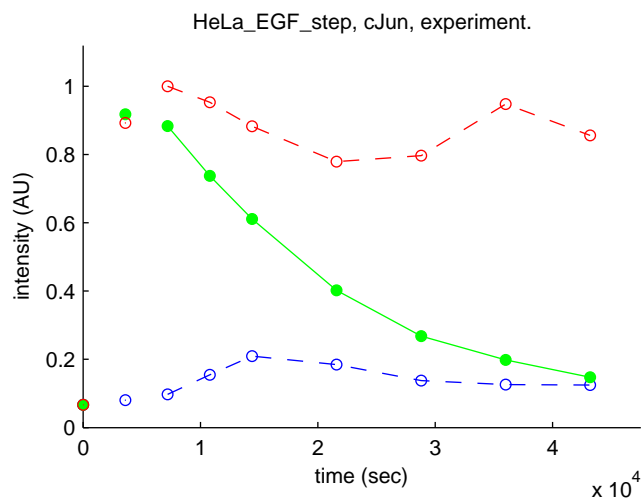


HeLa_EGF_step, p21Cip1, peak intensity.

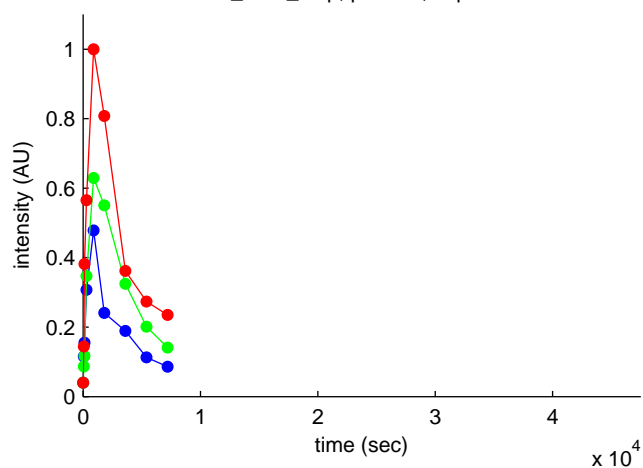
HeLa_EGF_step, pRSK \rightarrow p21Cip1, Efficiency (E).



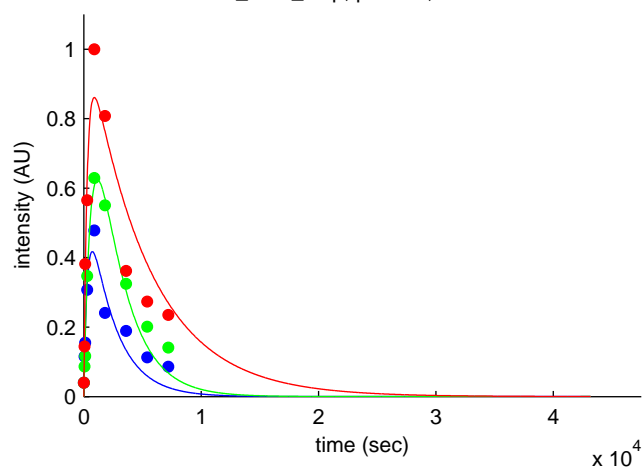




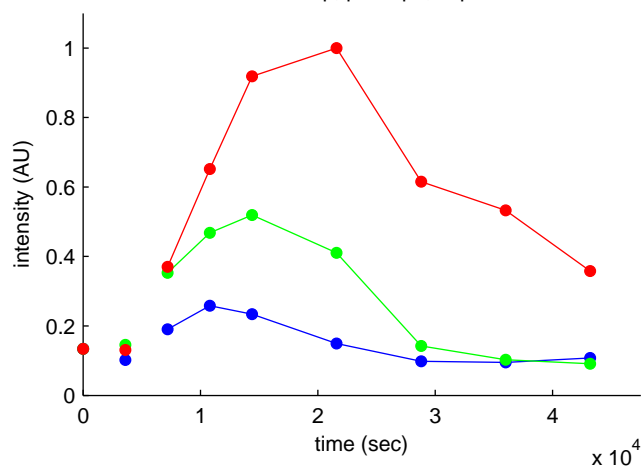
HeLa_EGF_step, pCREB, experiment.



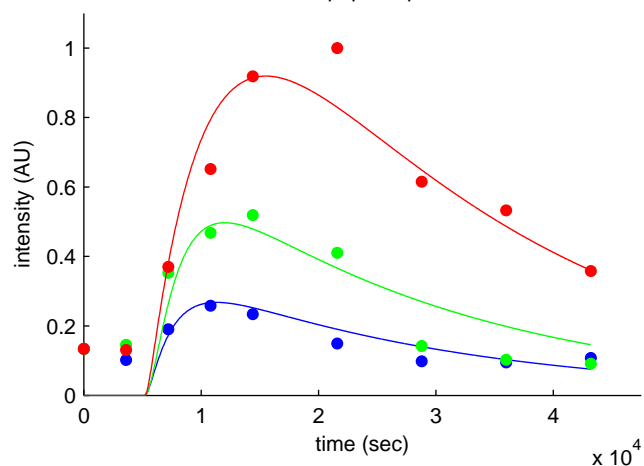
HeLa_EGF_step, pCREB, simulation.



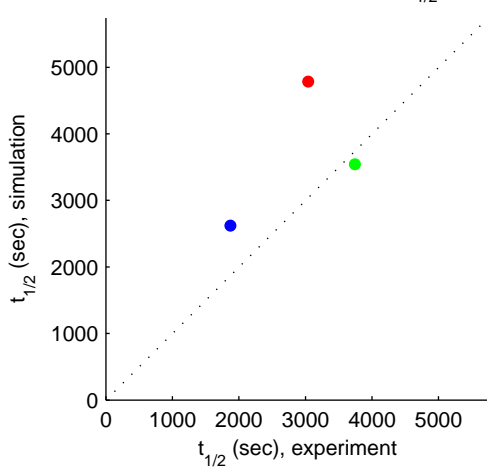
HeLa_EGF_step, p21Cip1, experiment.



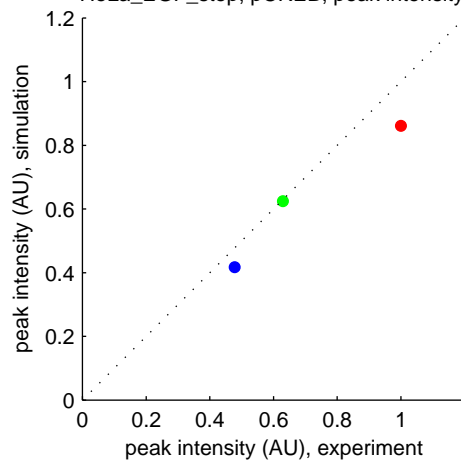
HeLa_EGF_step, p21Cip1, simulation.



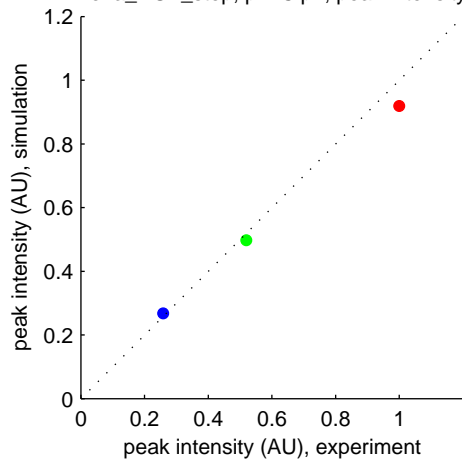
HeLa_EGF_step, pCREB, $t_{1/2}$



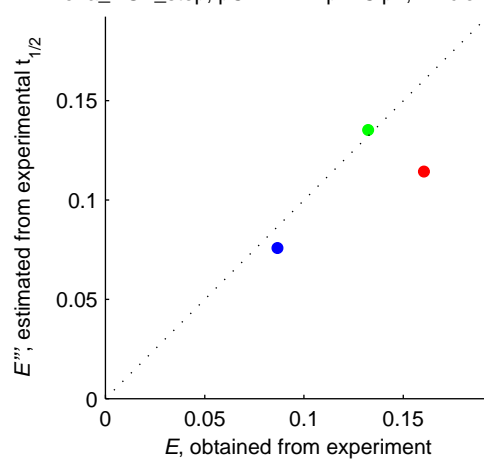
HeLa_EGF_step, pCREB, peak intensity.



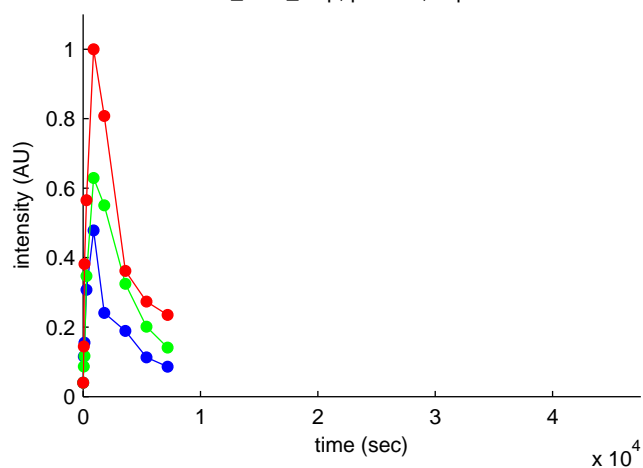
HeLa_EGF_step, p21Cip1, peak intensity.



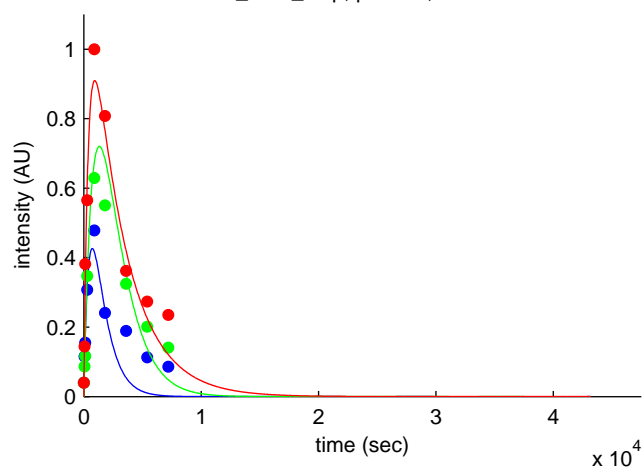
HeLa_EGF_step, pCREB \rightarrow p21Cip1, Efficiency (E).



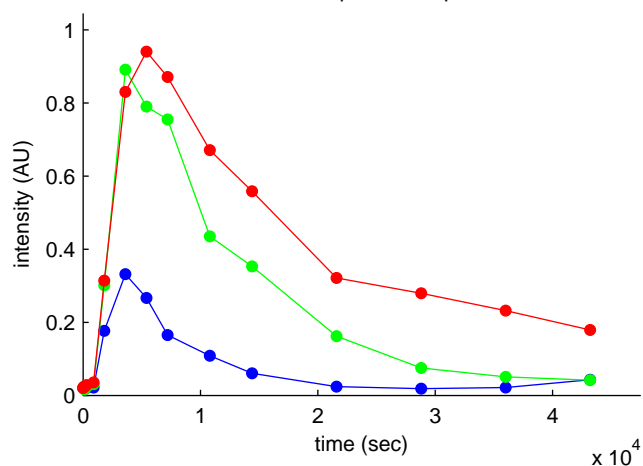
HeLa_EGF_step, pCREB, experiment.



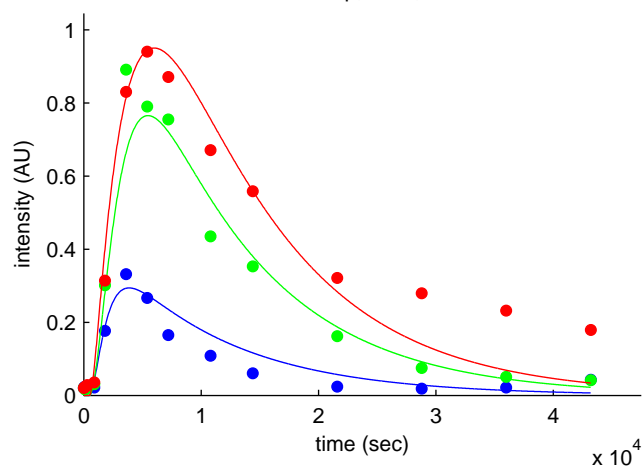
HeLa_EGF_step, pCREB, simulation.



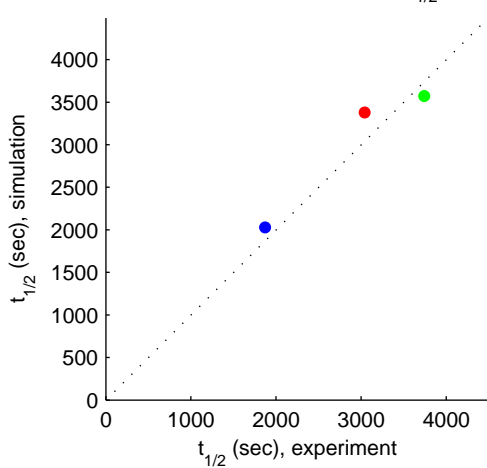
HeLa_EGF_step, cFos, experiment.



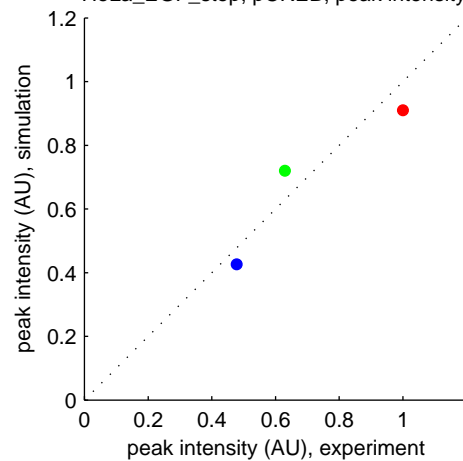
HeLa_EGF_step, cFos, simulation.



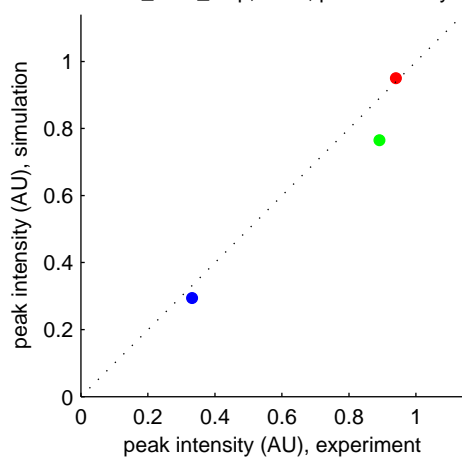
HeLa_EGF_step, pCREB, $t_{1/2}$



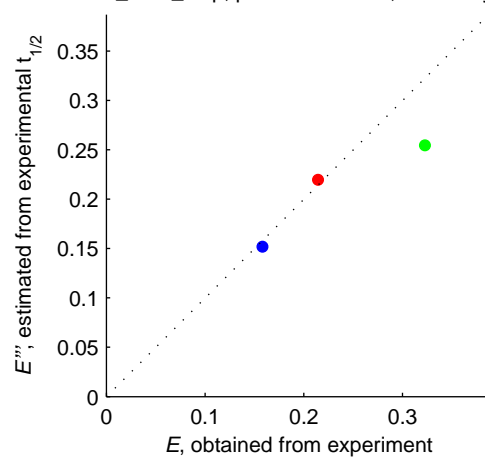
HeLa_EGF_step, pCREB, peak intensity.



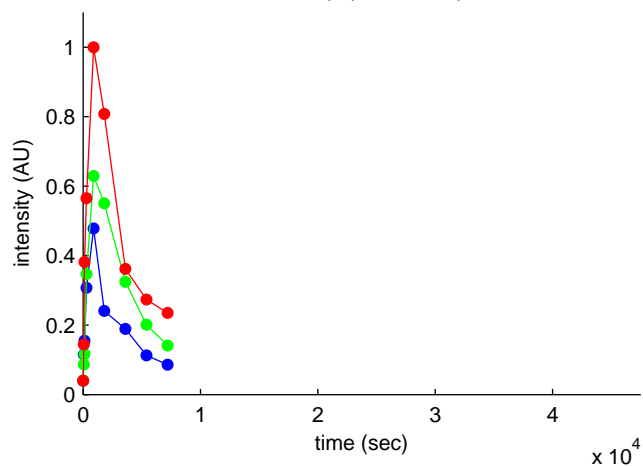
HeLa_EGF_step, cFos, peak intensity.



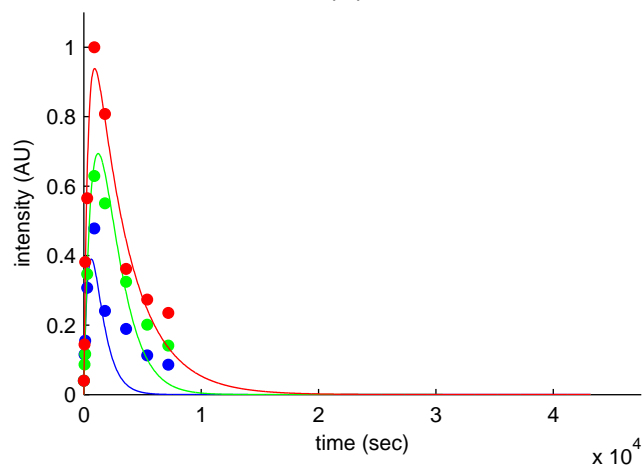
HeLa_EGF_step, pCREB \rightarrow cFos, Efficiency (E).



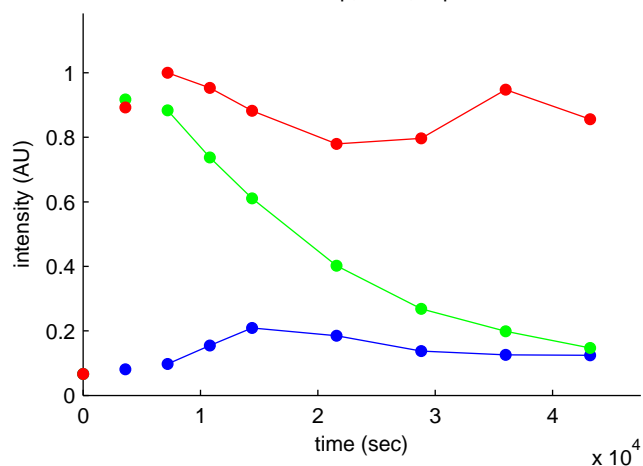
HeLa_EGF_step, pCREB, experiment.



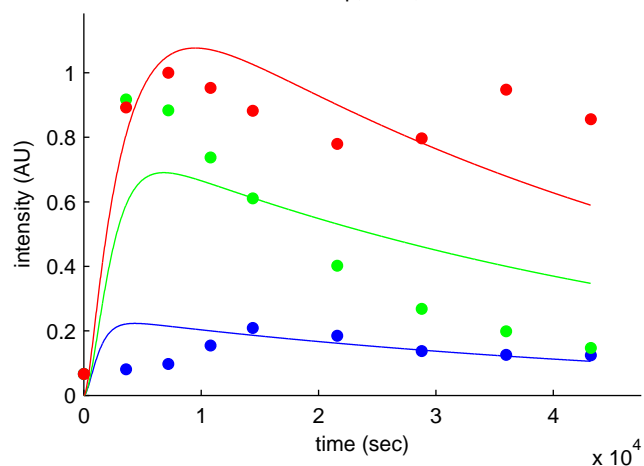
HeLa_EGF_step, pCREB, simulation.



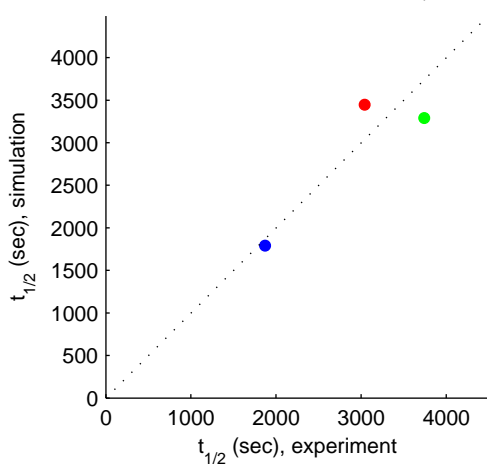
HeLa_EGF_step, cJun, experiment.



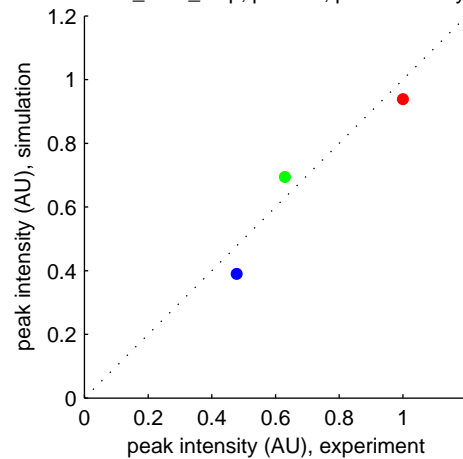
HeLa_EGF_step, cJun, simulation.



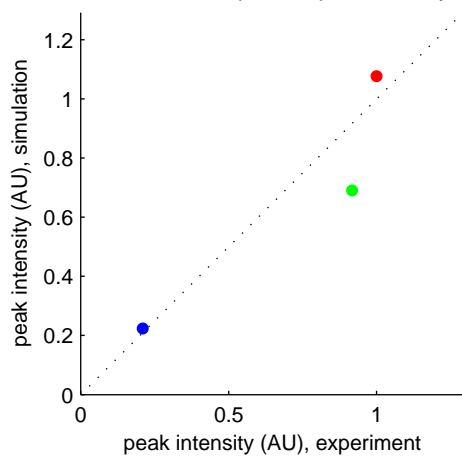
HeLa_EGF_step, pCREB, $t_{1/2}$



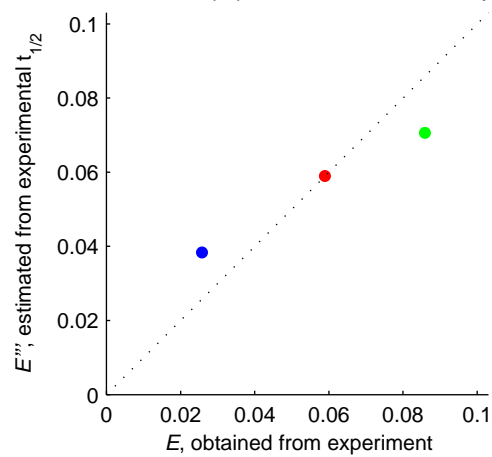
HeLa_EGF_step, pCREB, peak intensity.

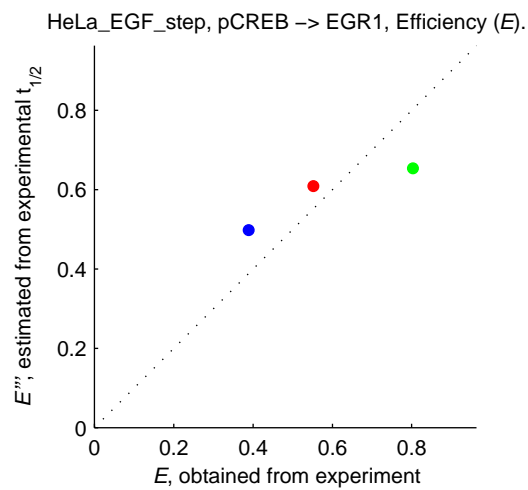
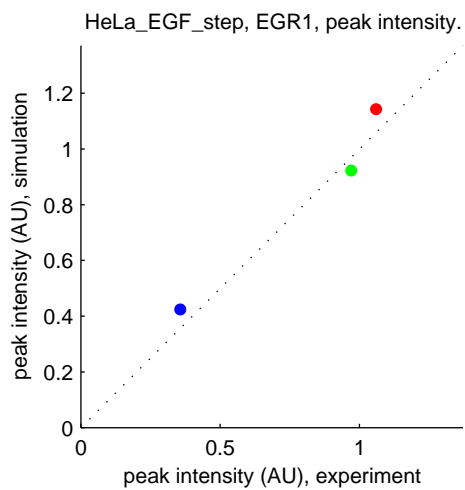
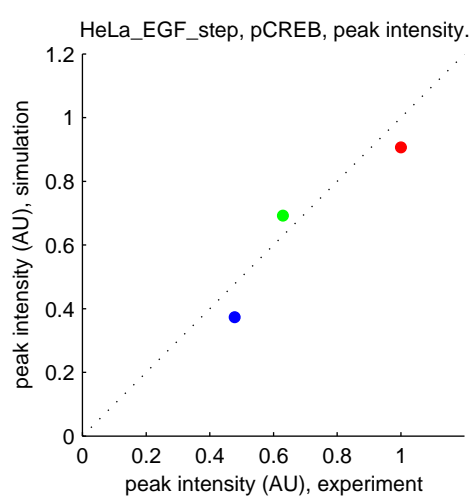
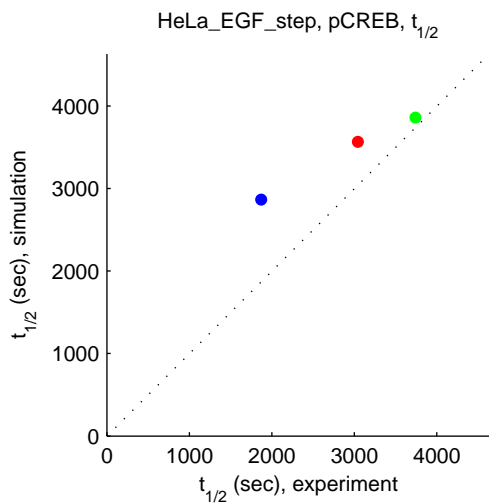
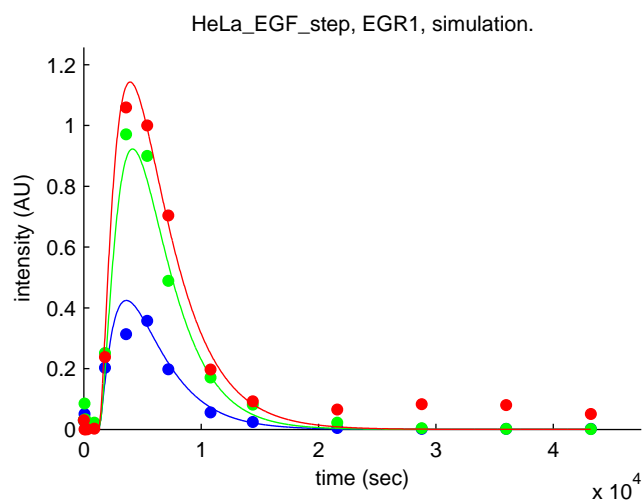
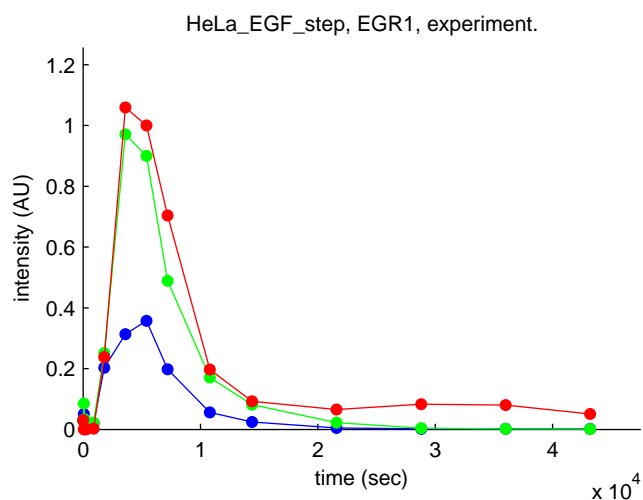
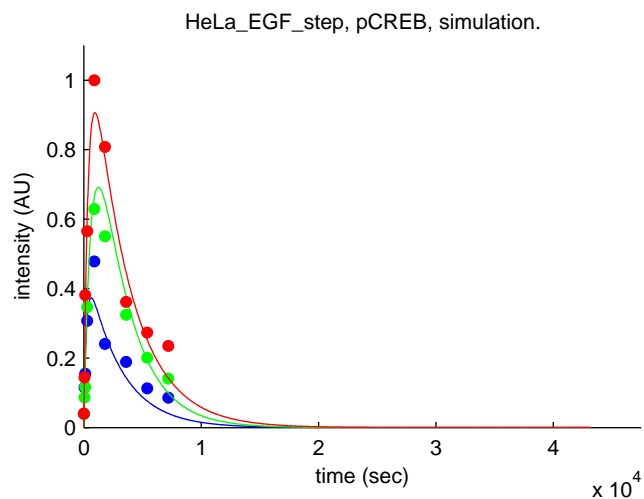
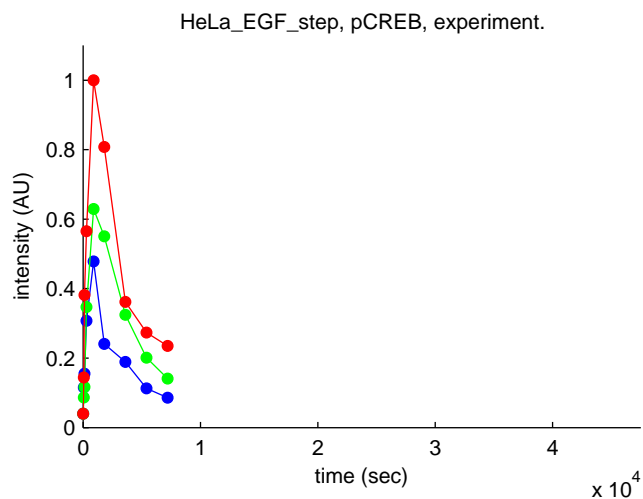


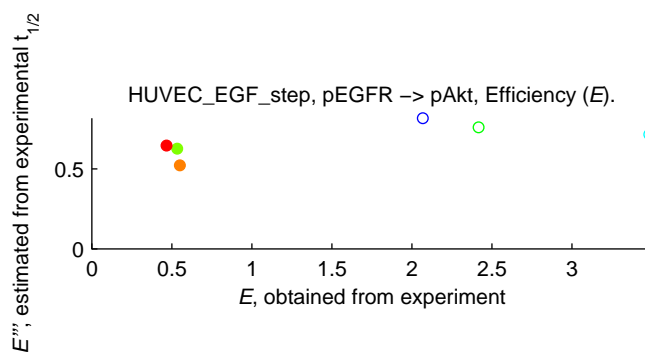
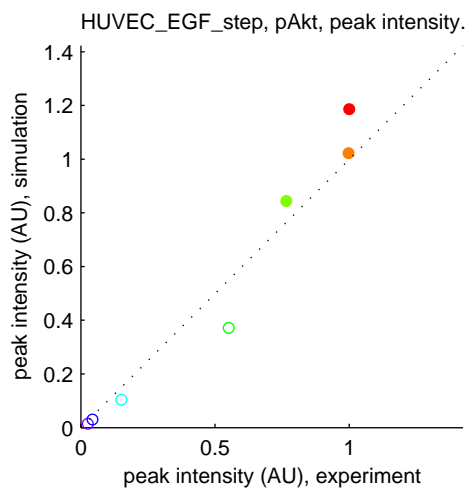
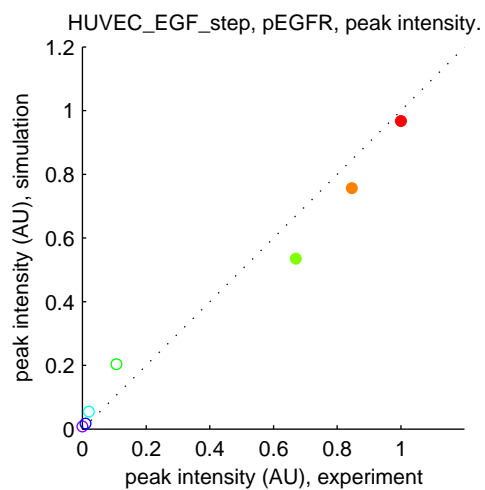
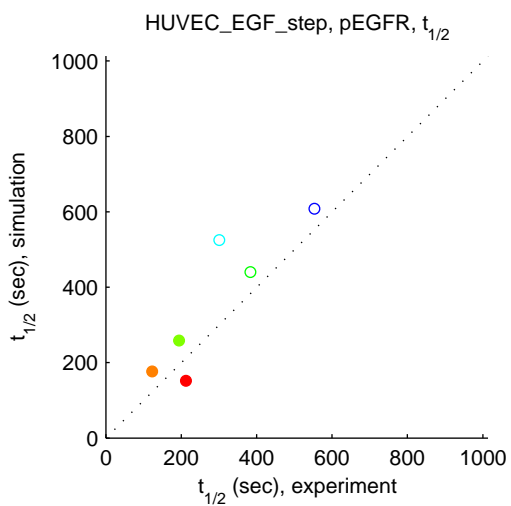
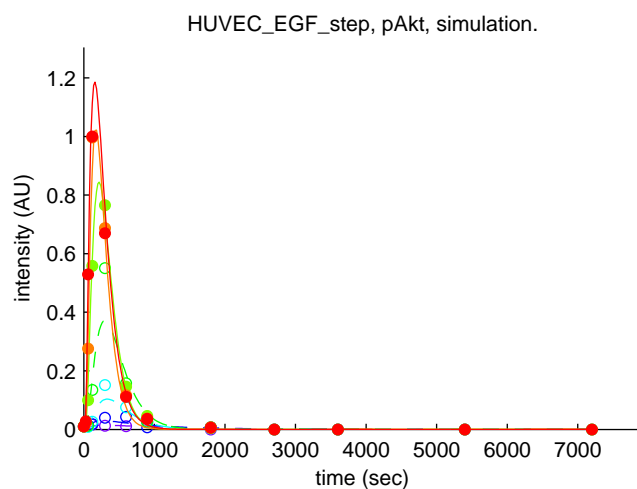
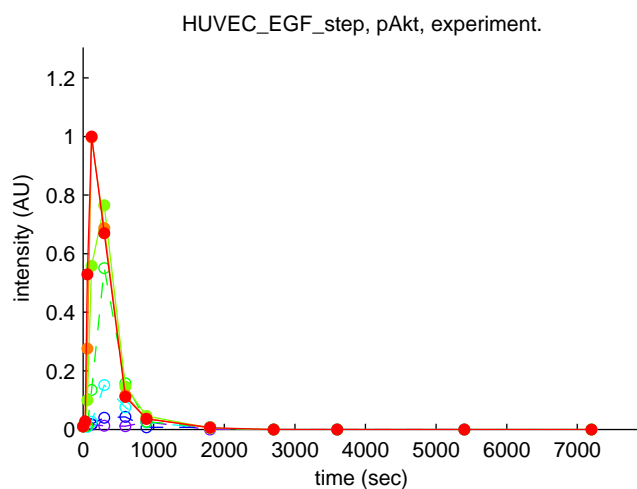
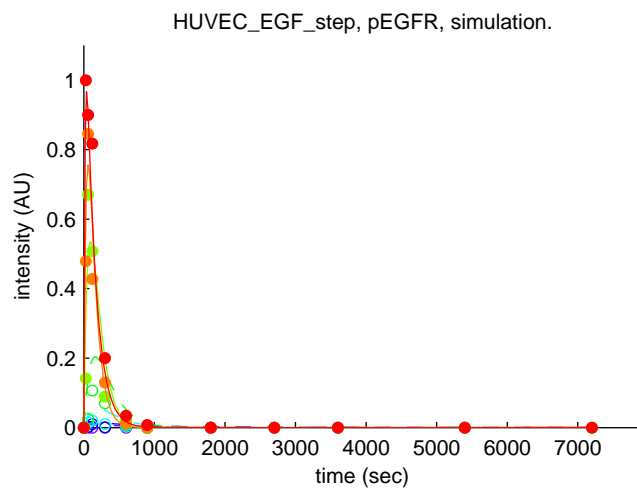
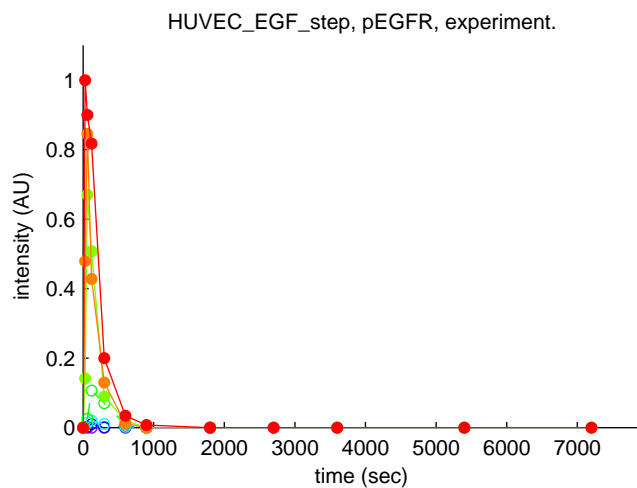
HeLa_EGF_step, cJun, peak intensity.

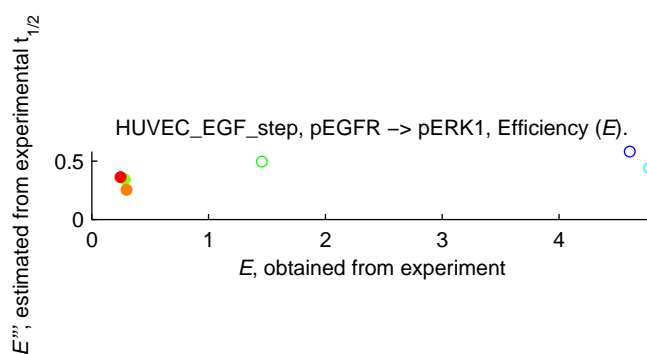
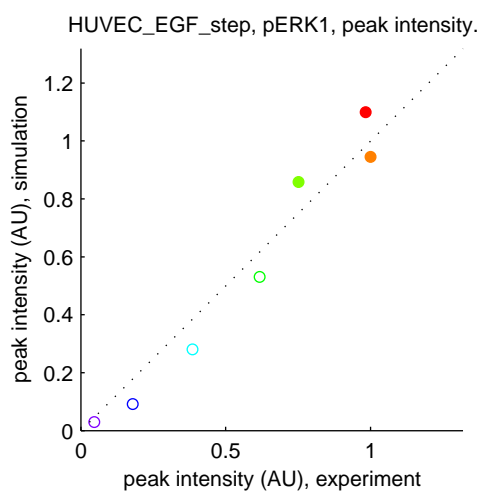
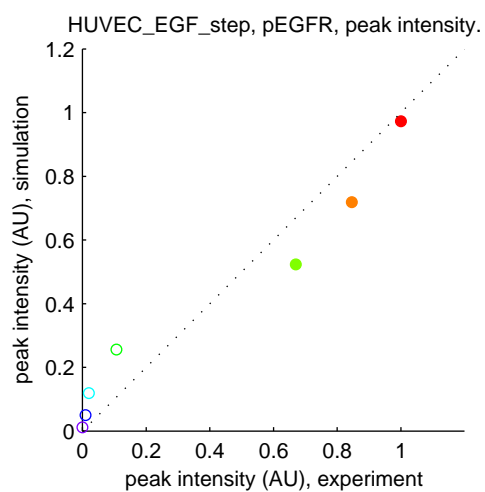
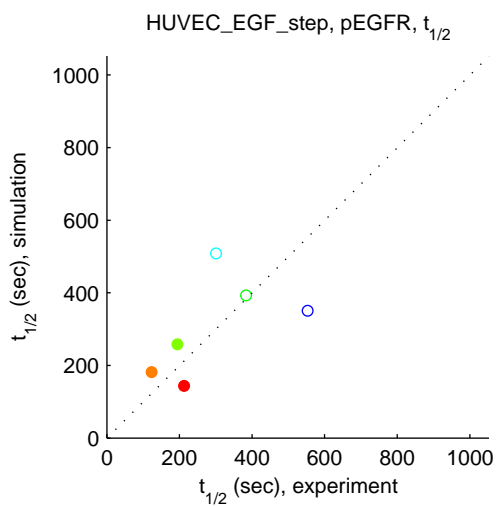
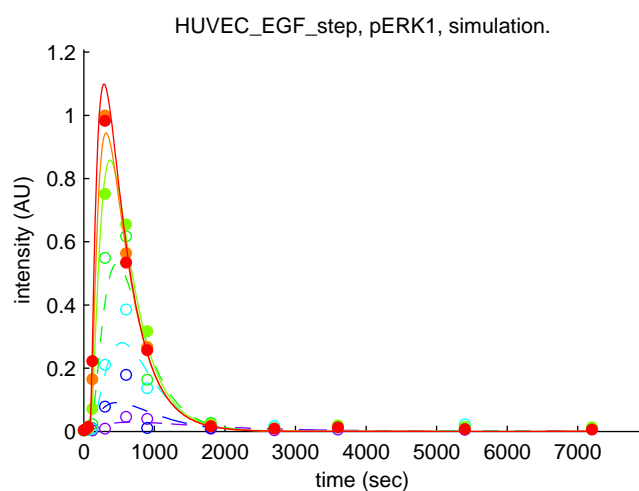
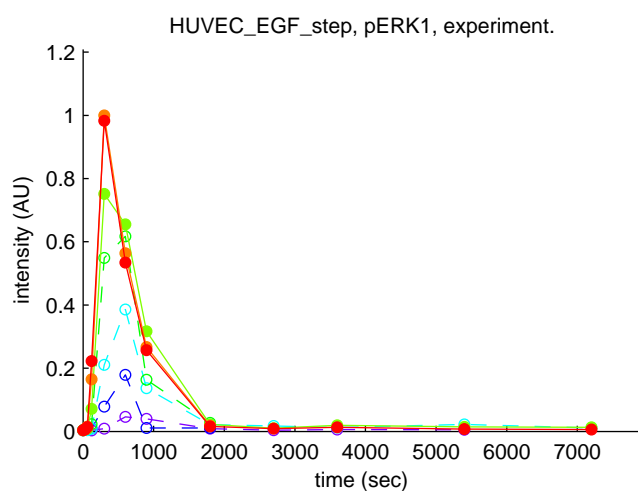
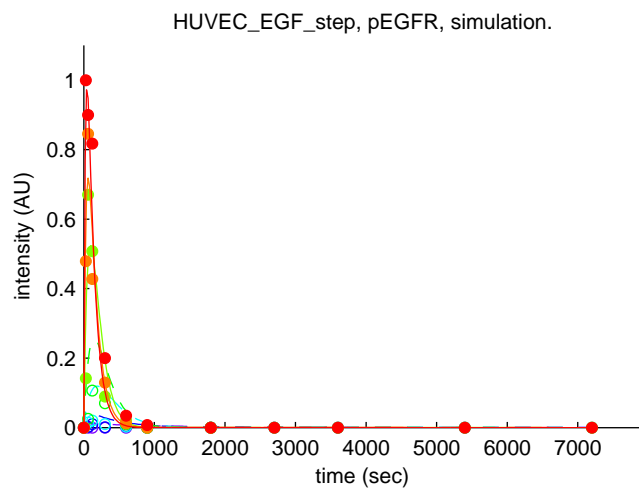
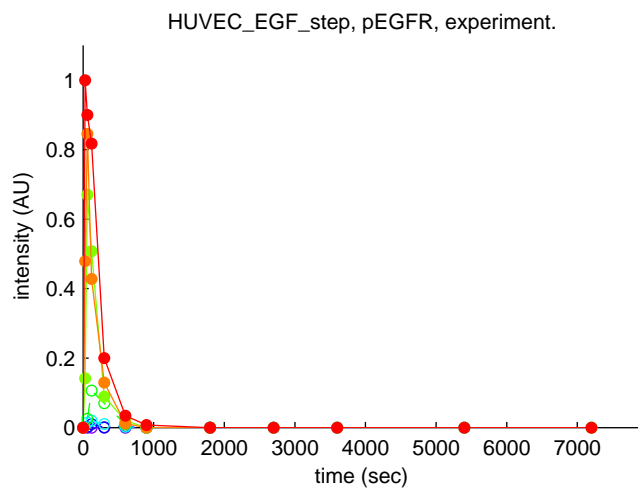


HeLa_EGF_step, pCREB \rightarrow cJun, Efficiency (E).

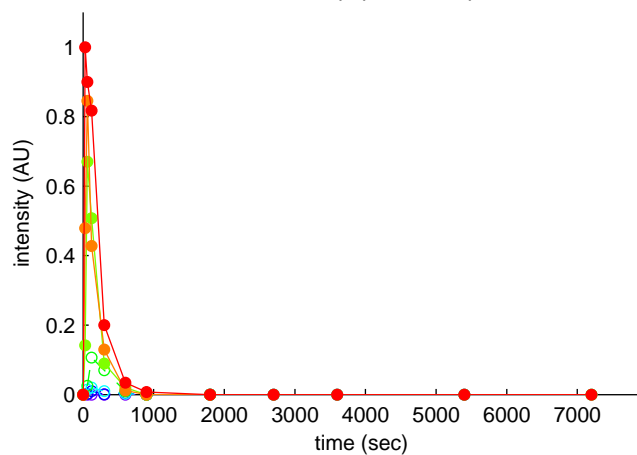




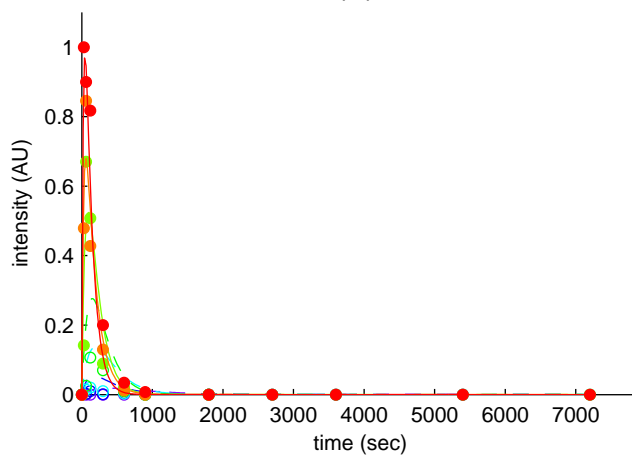




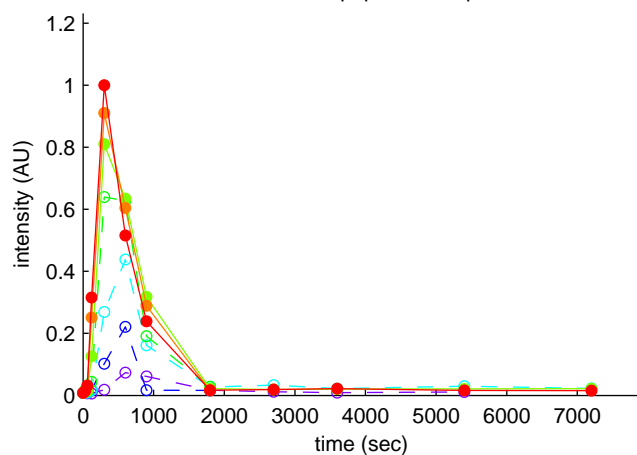
HUVEC_EGF_step, pEGFR, experiment.



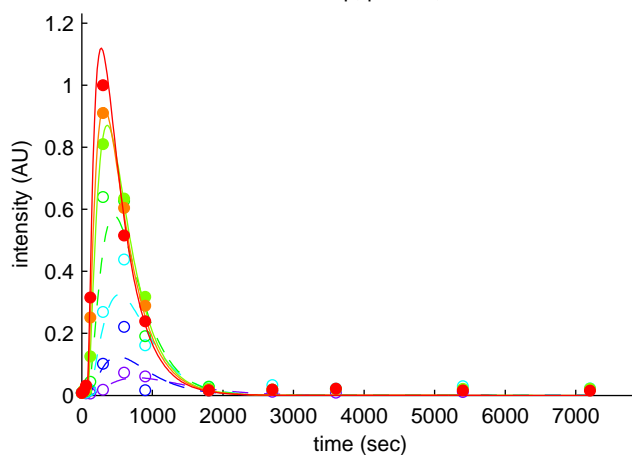
HUVEC_EGF_step, pEGFR, simulation.



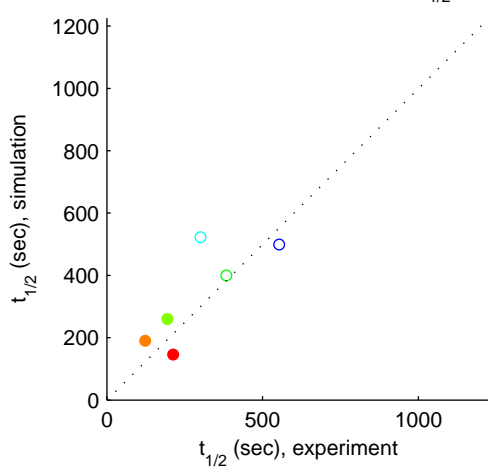
HUVEC_EGF_step, pERK2, experiment.



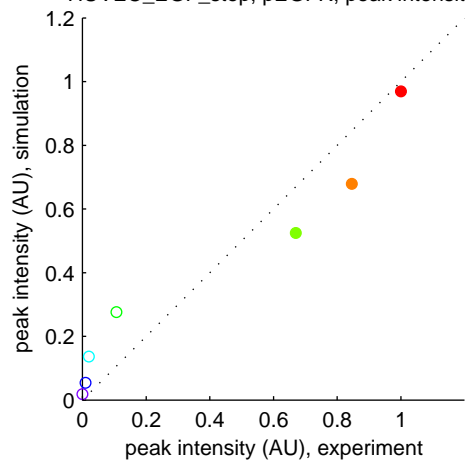
HUVEC_EGF_step, pERK2, simulation.



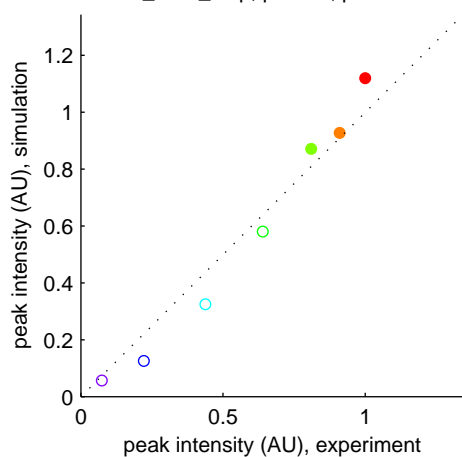
HUVEC_EGF_step, pEGFR, $t_{1/2}$



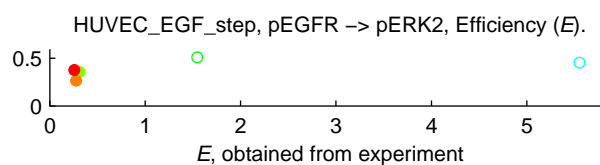
HUVEC_EGF_step, pEGFR, peak intensity.



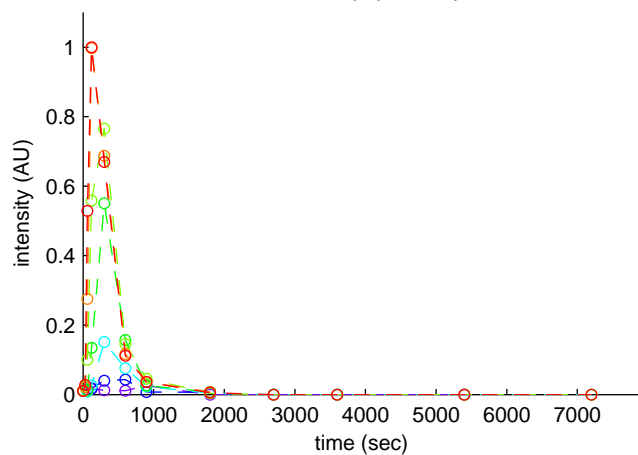
HUVEC_EGF_step, pERK2, peak intensity.



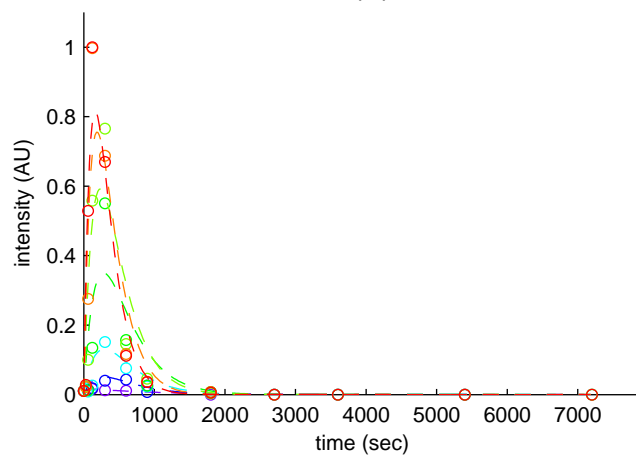
E'' , estimated from experimental $t_{1/2}$



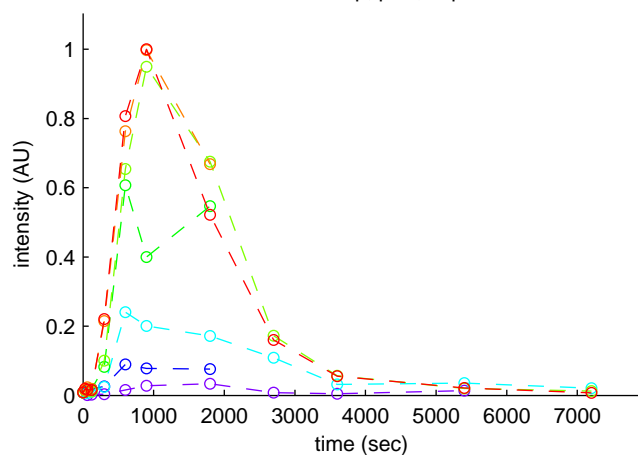
HUVEC_EGF_step, pAkt, experiment.



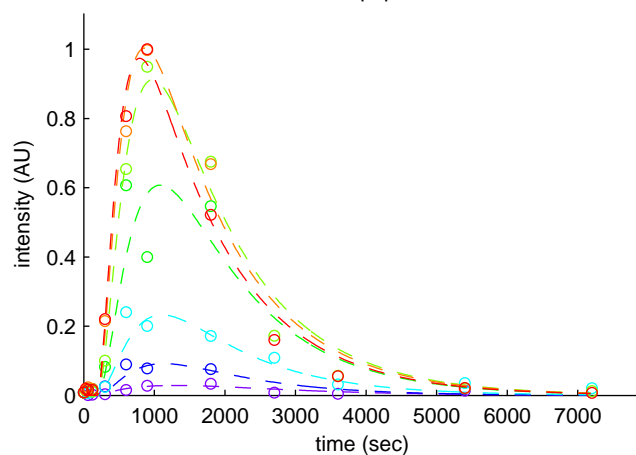
HUVEC_EGF_step, pAkt, simulation.



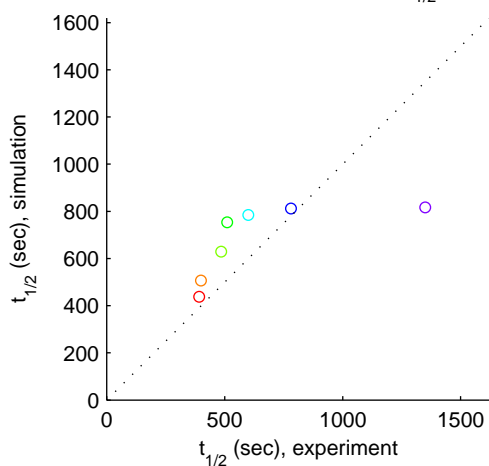
HUVEC_EGF_step, pS6, experiment.



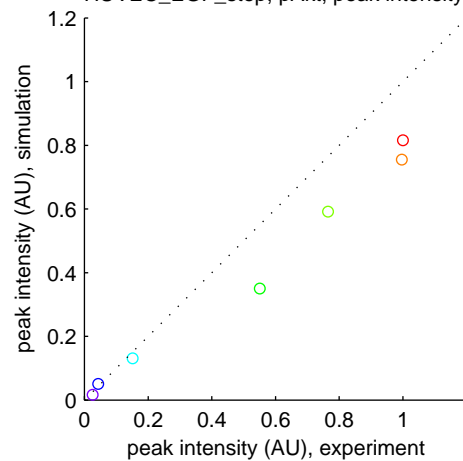
HUVEC_EGF_step, pS6, simulation.



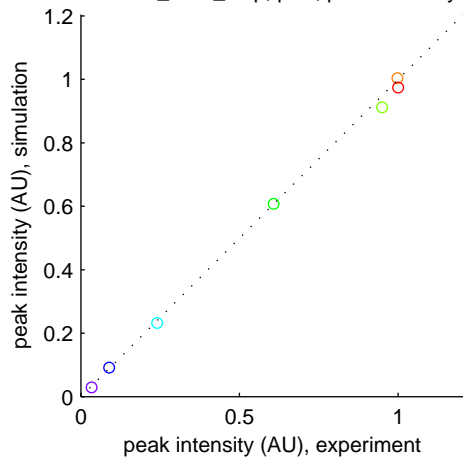
HUVEC_EGF_step, pAkt, $t_{1/2}$



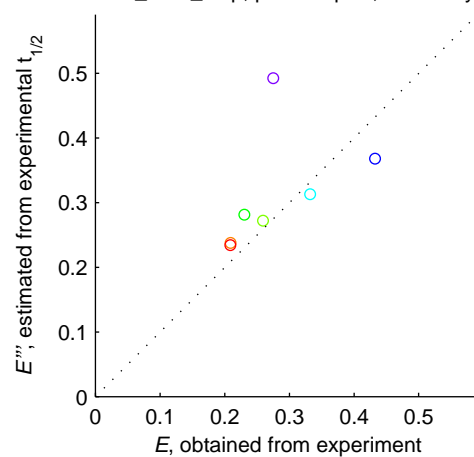
HUVEC_EGF_step, pAkt, peak intensity.



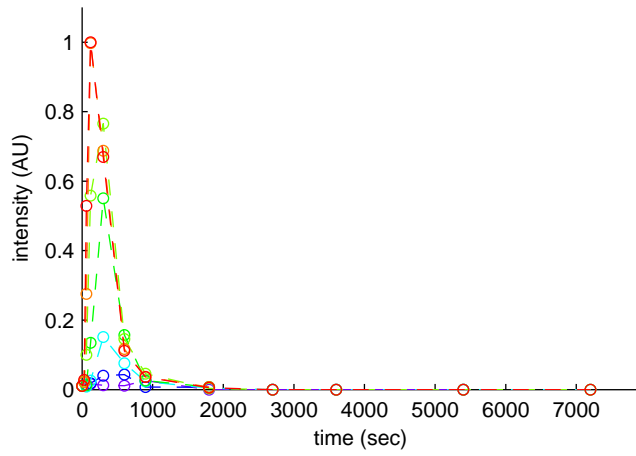
HUVEC_EGF_step, pS6, peak intensity.



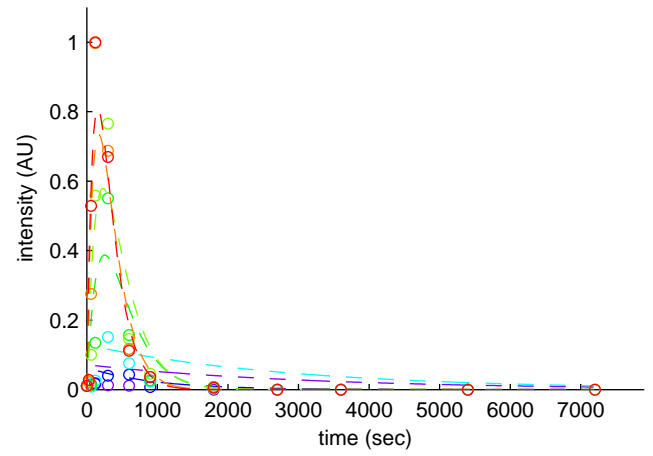
HUVEC_EGF_step, pAkt \rightarrow pS6, Efficiency (E).



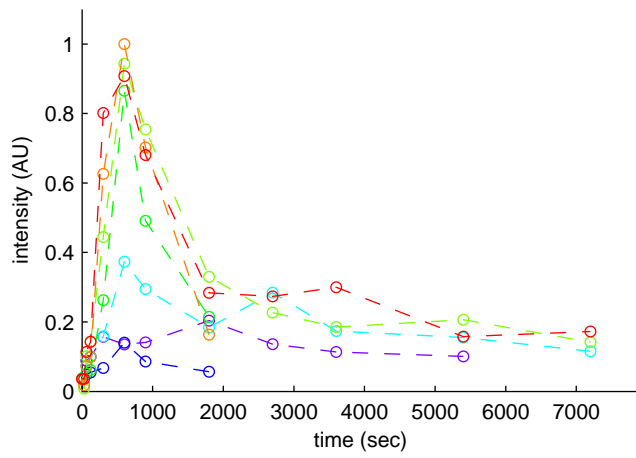
HUVEC_EGF_step, pAkt, experiment.



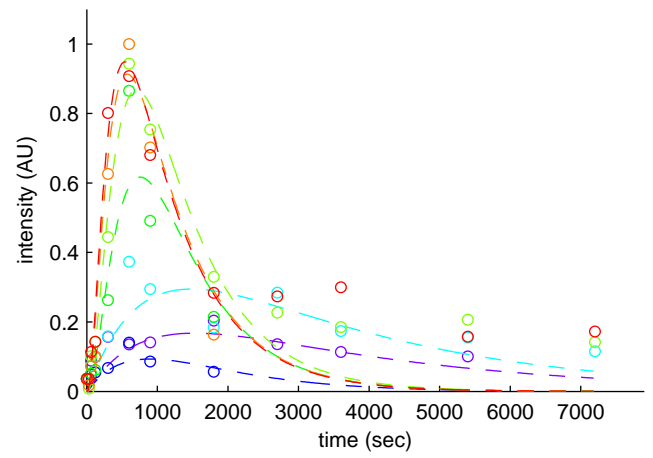
HUVEC_EGF_step, pAkt, simulation.



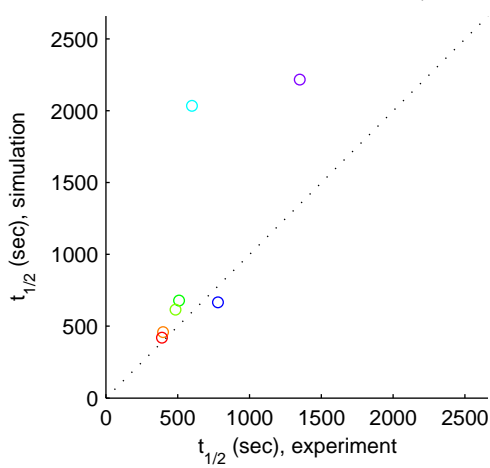
HUVEC_EGF_step, pS6K, experiment.



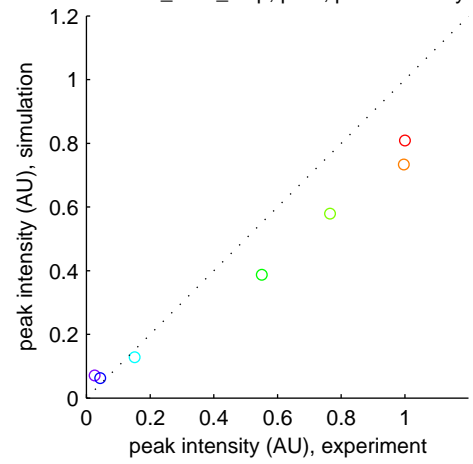
HUVEC_EGF_step, pS6K, simulation.



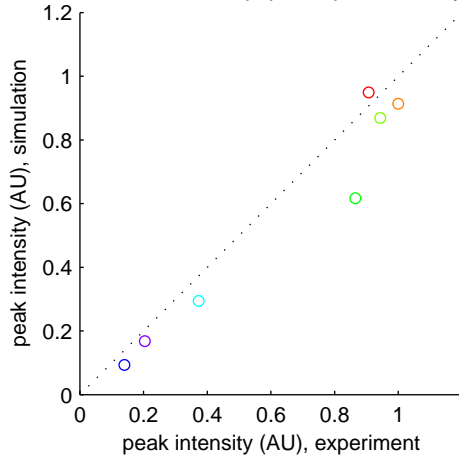
HUVEC_EGF_step, pAkt, $t_{1/2}$



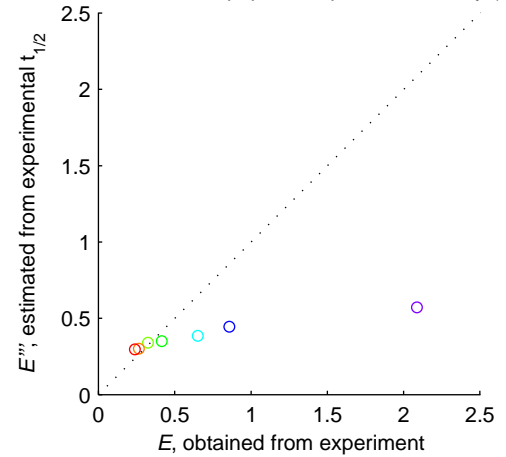
HUVEC_EGF_step, pAkt, peak intensity.



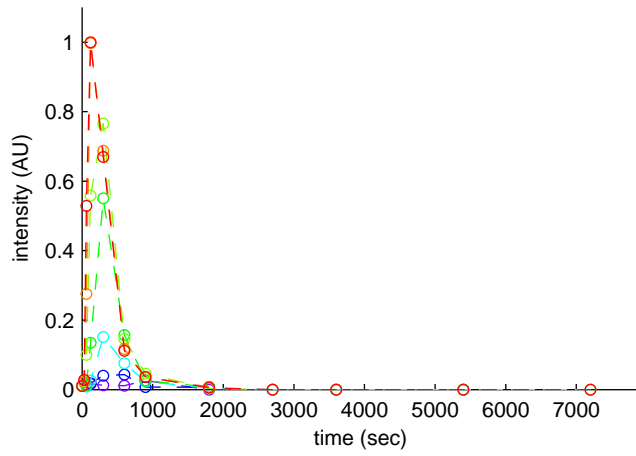
HUVEC_EGF_step, pS6K, peak intensity.



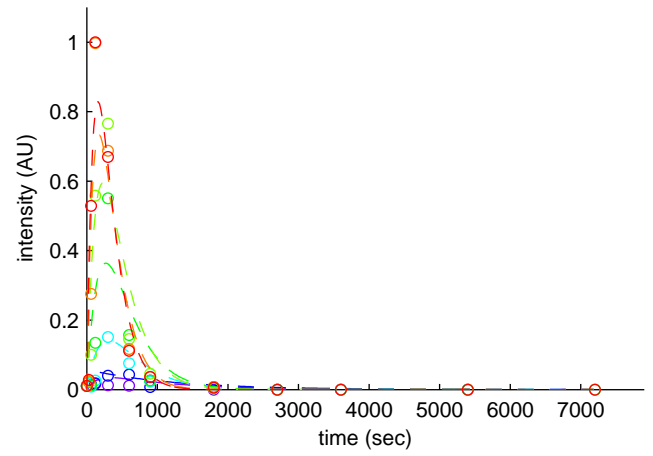
HUVEC_EGF_step, pAkt \rightarrow pS6K, Efficiency (E).



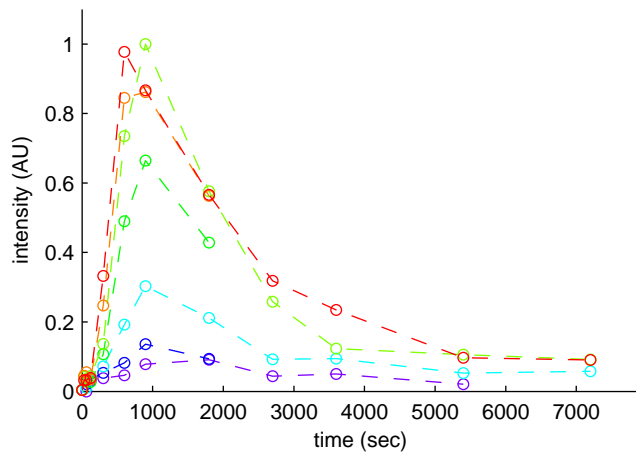
HUVEC_EGF_step, pAkt, experiment.



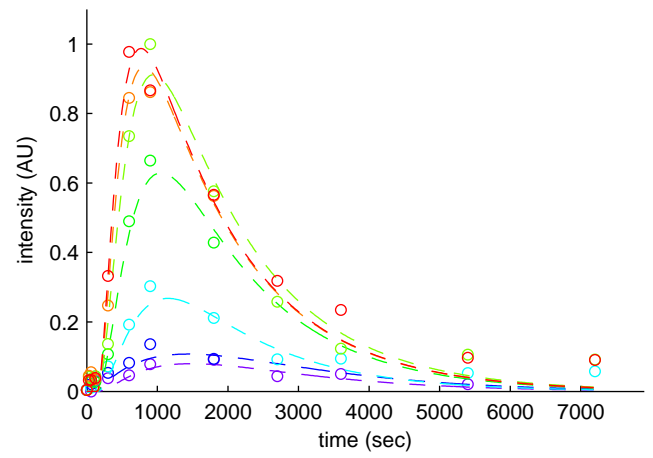
HUVEC_EGF_step, pAkt, simulation.



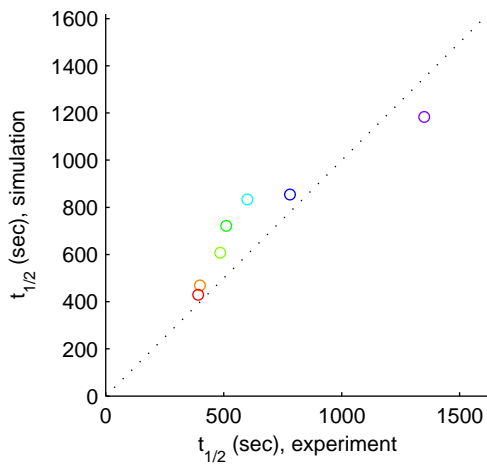
HUVEC_EGF_step, pelf4B, experiment.



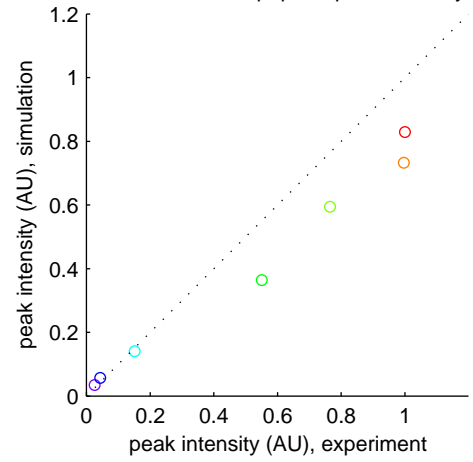
HUVEC_EGF_step, pelf4B, simulation.



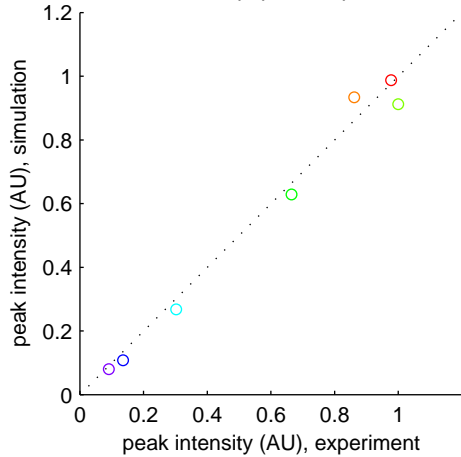
HUVEC_EGF_step, pAkt, $t_{1/2}$



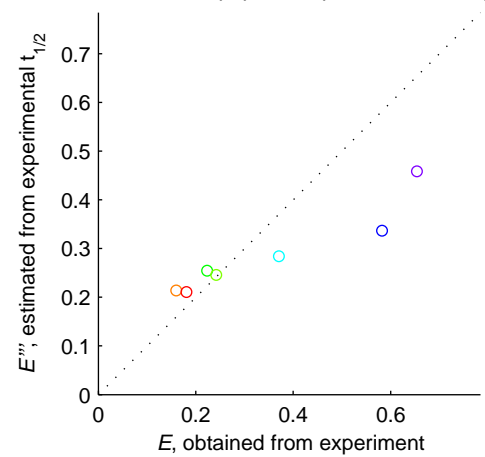
HUVEC_EGF_step, pAkt, peak intensity.



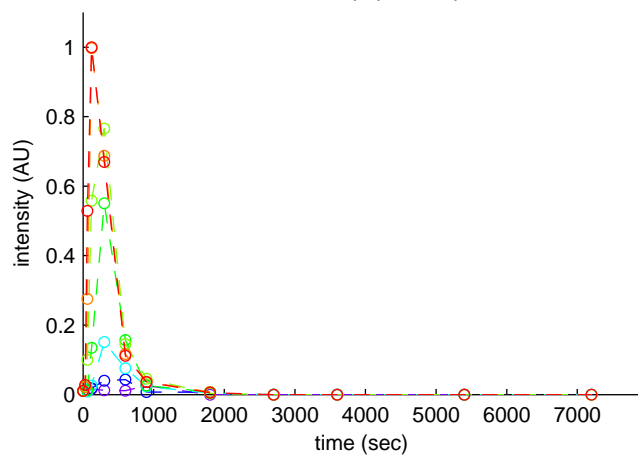
HUVEC_EGF_step, pelf4B, peak intensity.



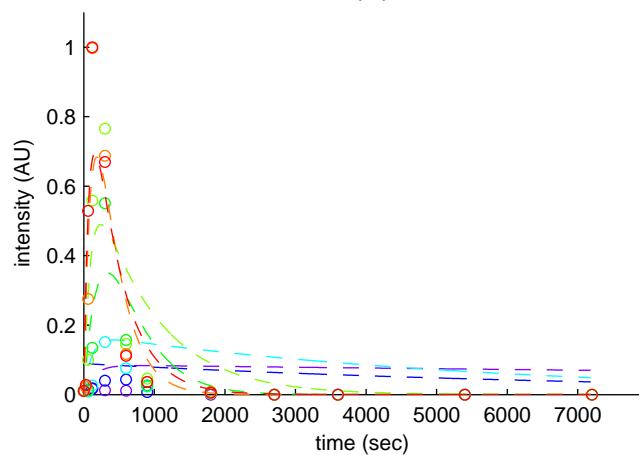
HUVEC_EGF_step, pAkt \rightarrow pelf4B, Efficiency (E).



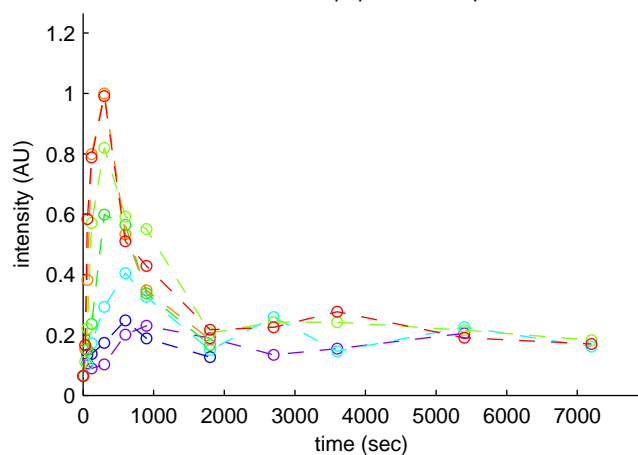
HUVEC_EGF_step, pAkt, experiment.



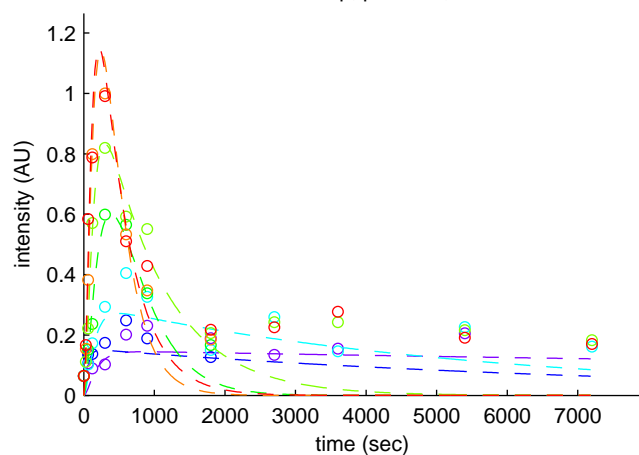
HUVEC_EGF_step, pAkt, simulation.



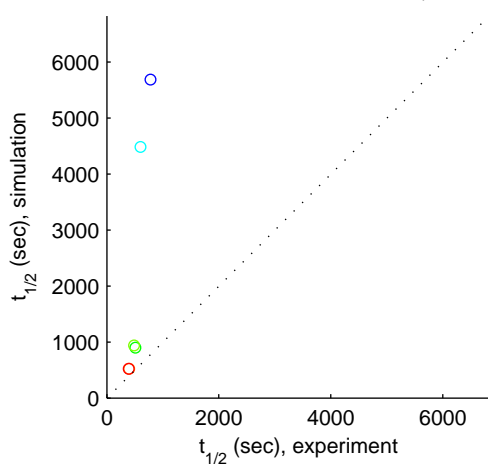
HUVEC_EGF_step, pGSK3b, experiment.



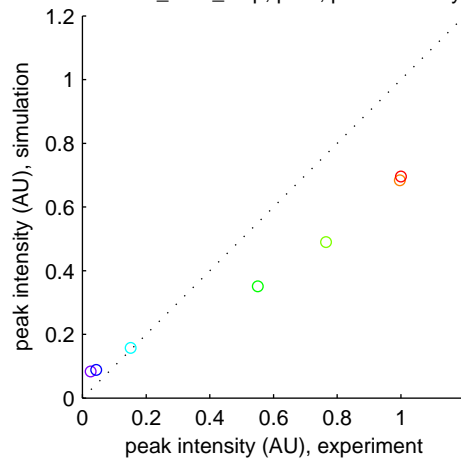
HUVEC_EGF_step, pGSK3b, simulation.



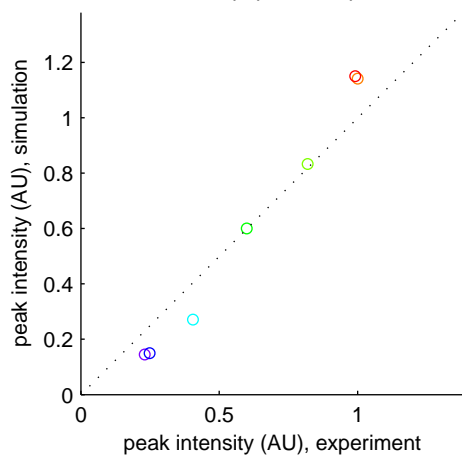
HUVEC_EGF_step, pAkt, $t_{1/2}$



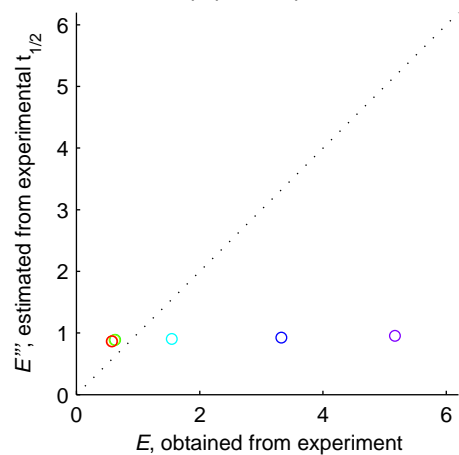
HUVEC_EGF_step, pAkt, peak intensity.



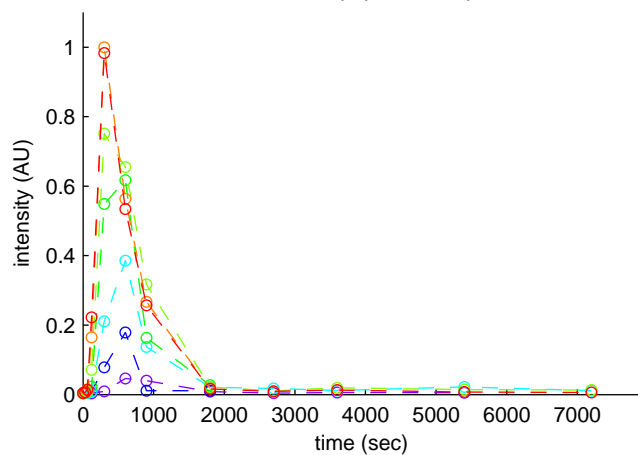
HUVEC_EGF_step, pGSK3b, peak intensity.



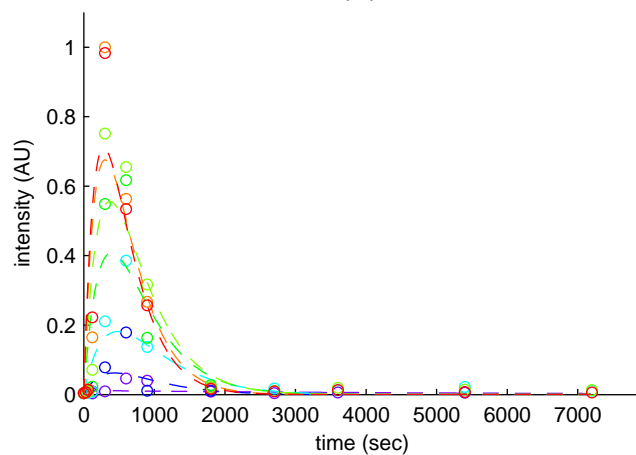
HUVEC_EGF_step, pAkt \rightarrow pGSK3b, Efficiency (E).



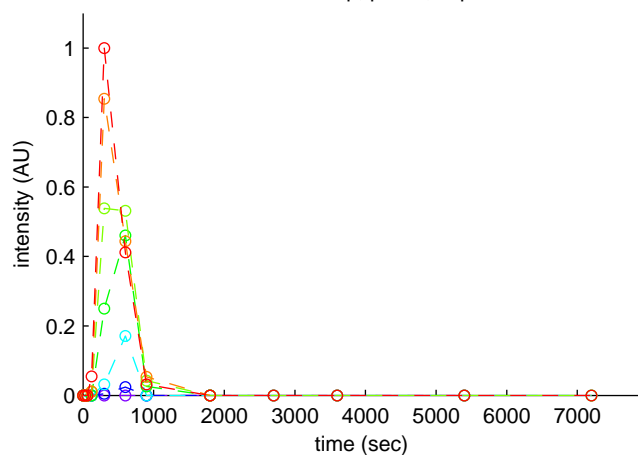
HUVEC_EGF_step, pERK1, experiment.



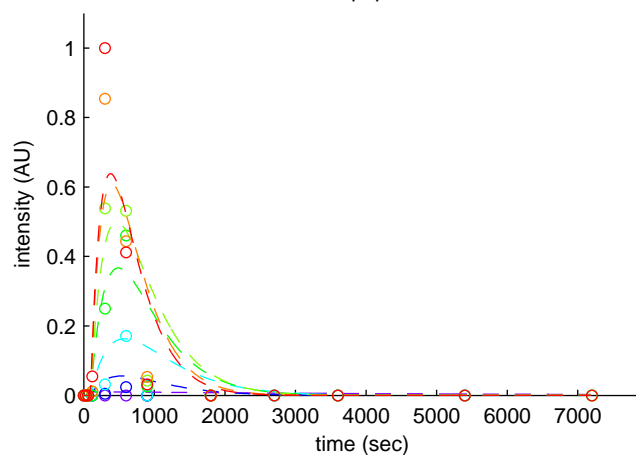
HUVEC_EGF_step, pERK1, simulation.



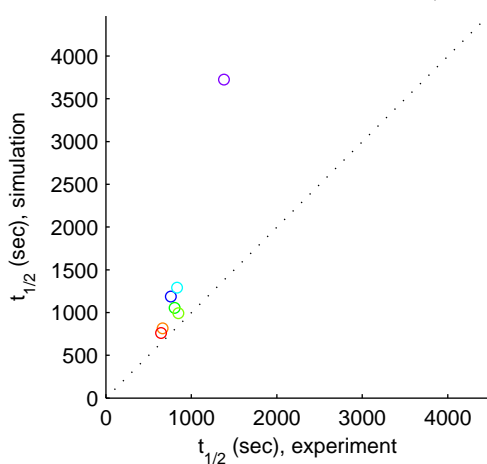
HUVEC_EGF_step, pRSK, experiment.



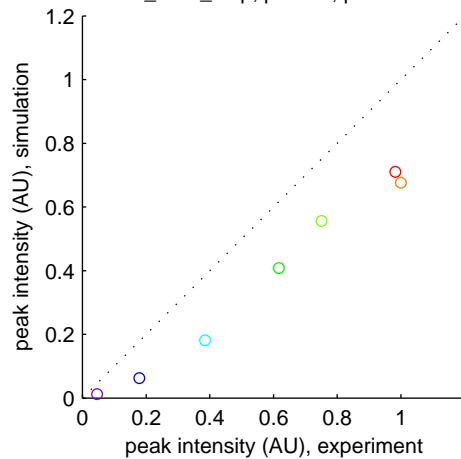
HUVEC_EGF_step, pRSK, simulation.



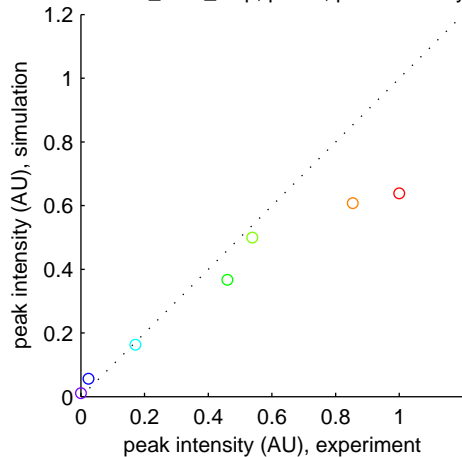
HUVEC_EGF_step, pERK1, $t_{1/2}$



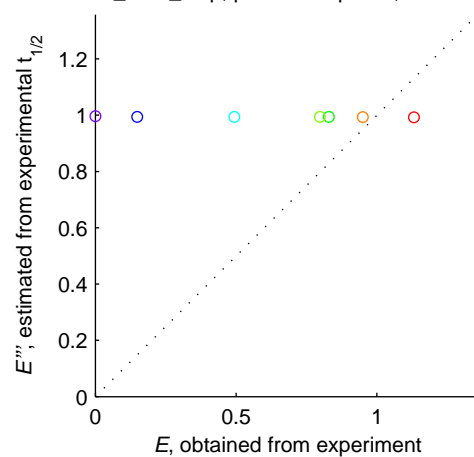
HUVEC_EGF_step, pERK1, peak intensity.



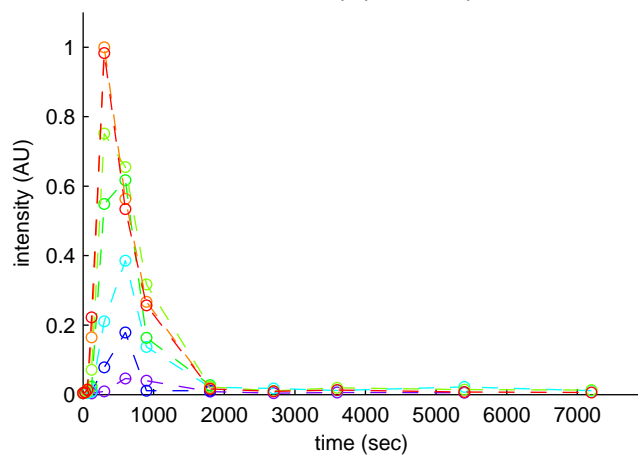
HUVEC_EGF_step, pRSK, peak intensity.



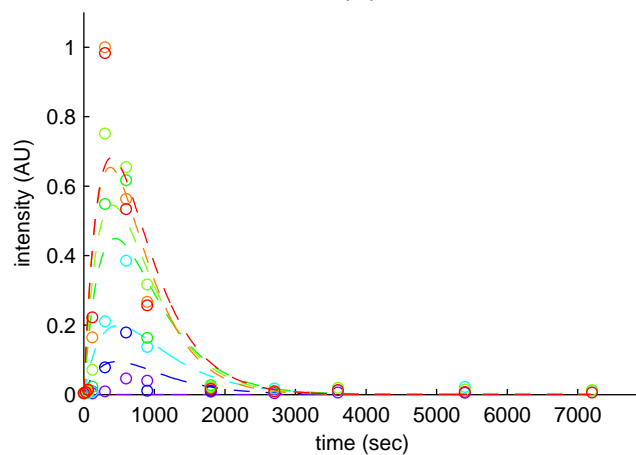
HUVEC_EGF_step, pERK1 \rightarrow pRSK, Efficiency (E).



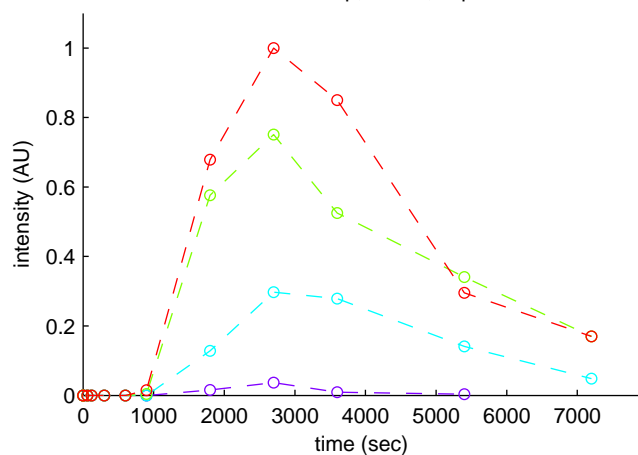
HUVEC_EGF_step, pERK1, experiment.



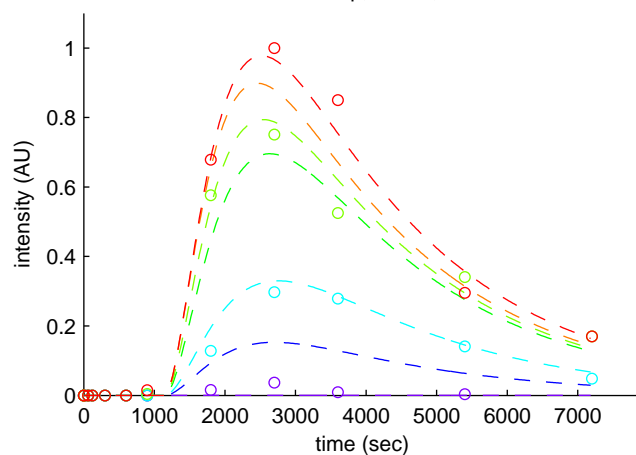
HUVEC_EGF_step, pERK1, simulation.



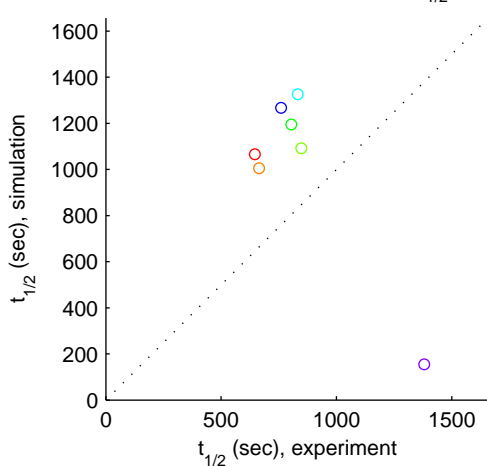
HUVEC_EGF_step, EGR1, experiment.



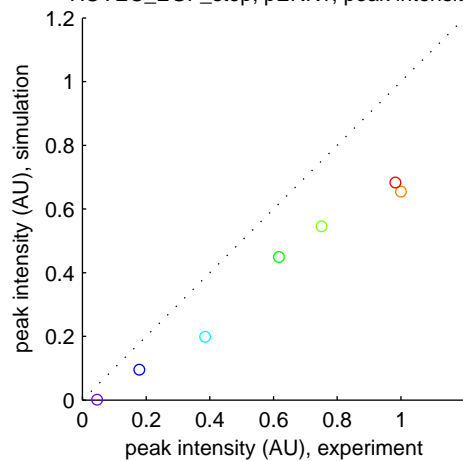
HUVEC_EGF_step, EGR1, simulation.



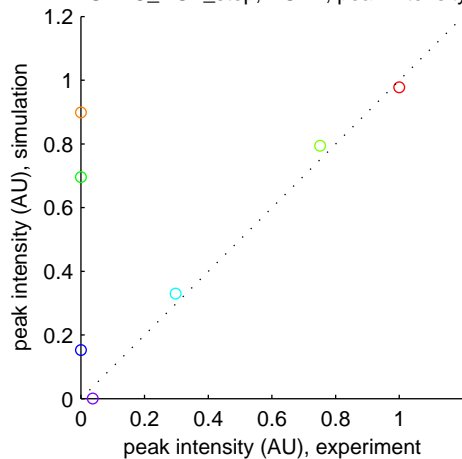
HUVEC_EGF_step, pERK1, $t_{1/2}$



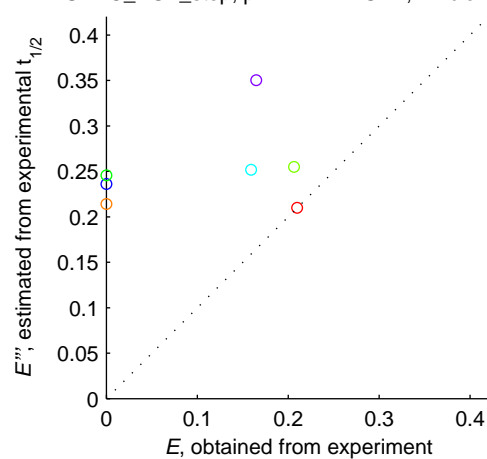
HUVEC_EGF_step, pERK1, peak intensity.



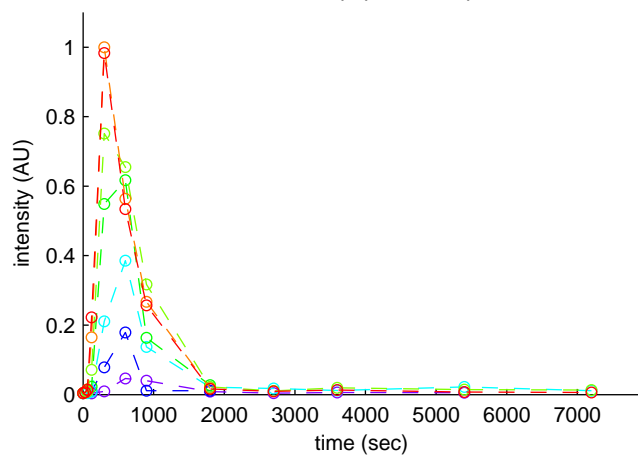
HUVEC_EGF_step, EGR1, peak intensity.



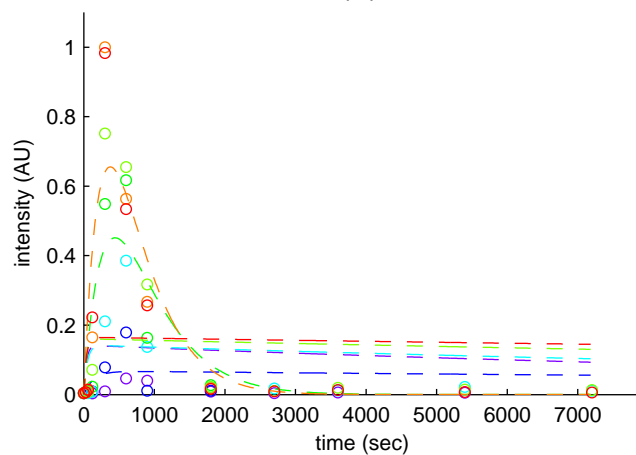
HUVEC_EGF_step, pERK1 \rightarrow EGR1, Efficiency (E).



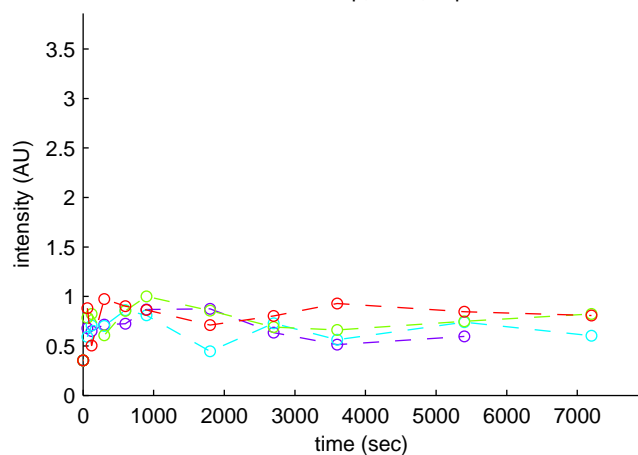
HUVEC_EGF_step, pERK1, experiment.



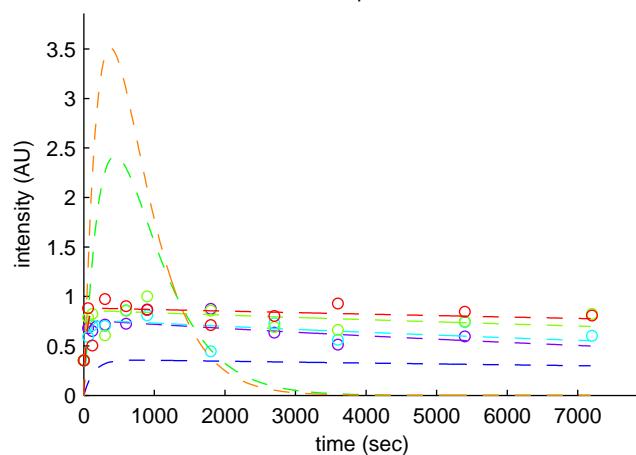
HUVEC_EGF_step, pERK1, simulation.



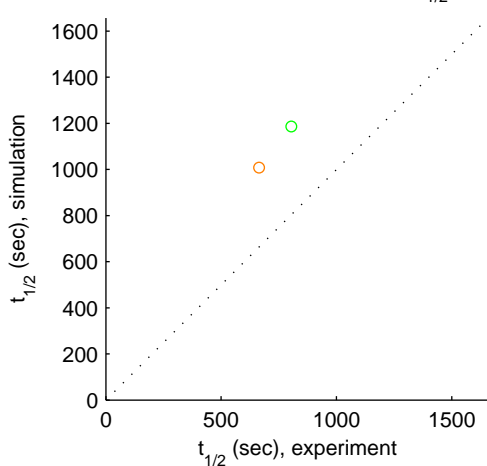
HUVEC_EGF_step, cJun, experiment.



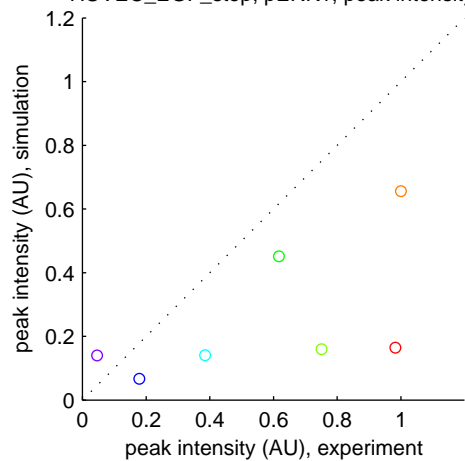
HUVEC_EGF_step, cJun, simulation.



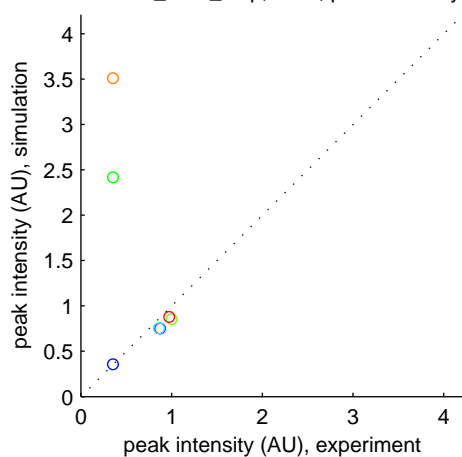
HUVEC_EGF_step, pERK1, $t_{1/2}$



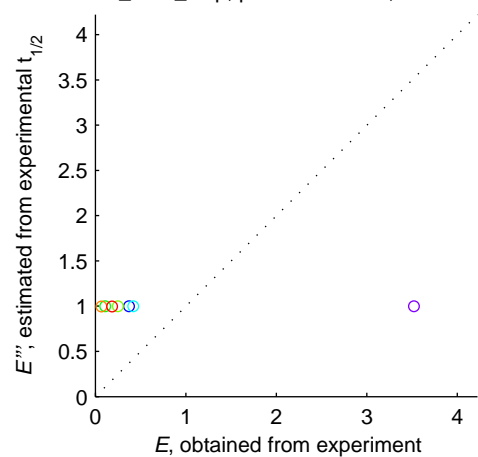
HUVEC_EGF_step, pERK1, peak intensity.



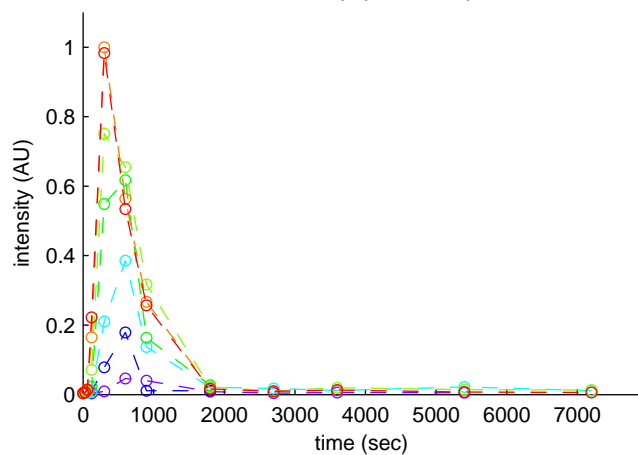
HUVEC_EGF_step, cJun, peak intensity.



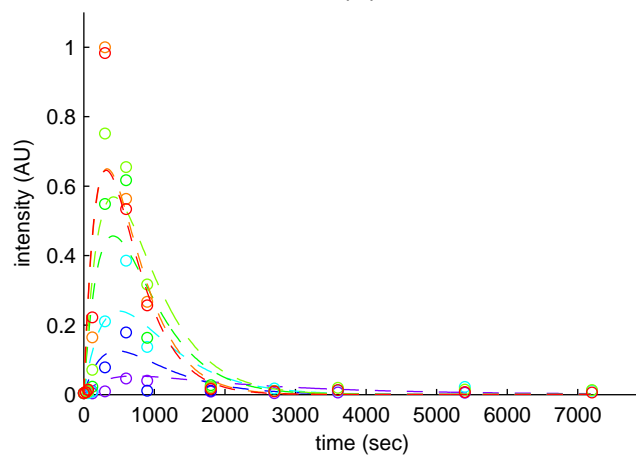
HUVEC_EGF_step, pERK1 \rightarrow cJun, Efficiency (E).



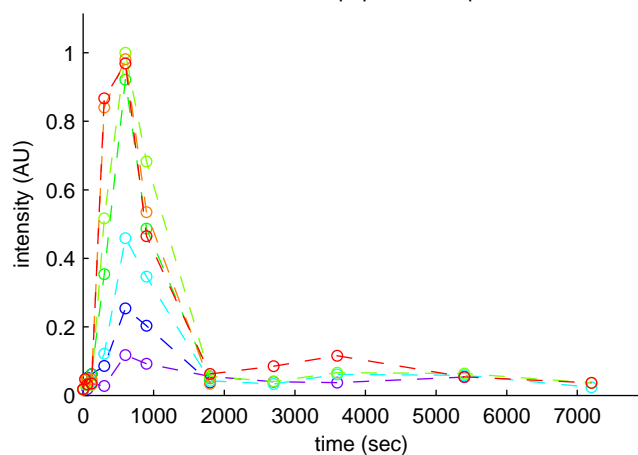
HUVEC_EGF_step, pERK1, experiment.



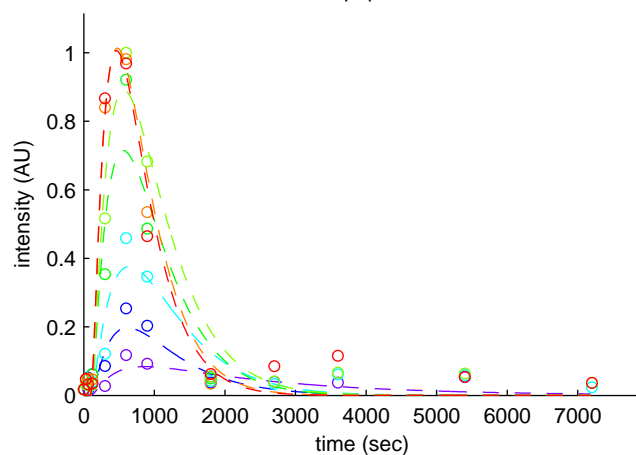
HUVEC_EGF_step, pERK1, simulation.



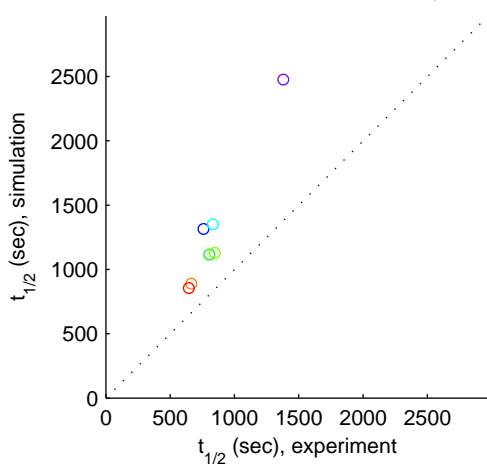
HUVEC_EGF_step, pCREB, experiment.



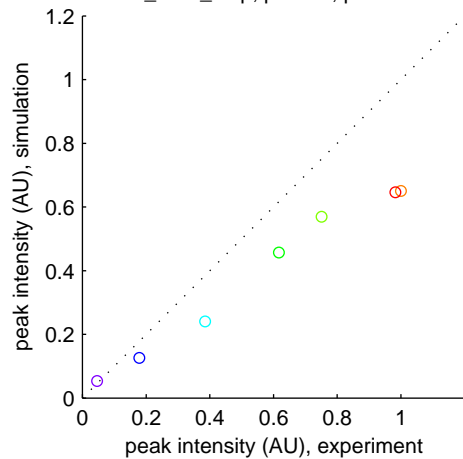
HUVEC_EGF_step, pCREB, simulation.



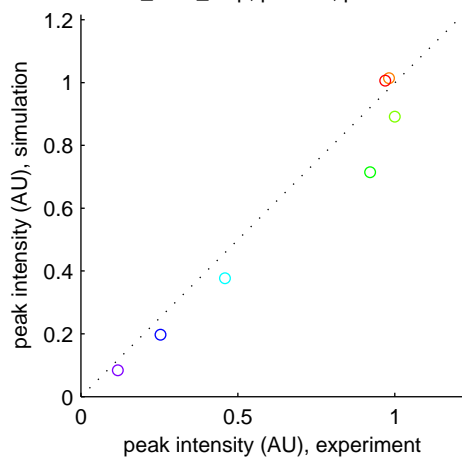
HUVEC_EGF_step, pERK1, $t_{1/2}$



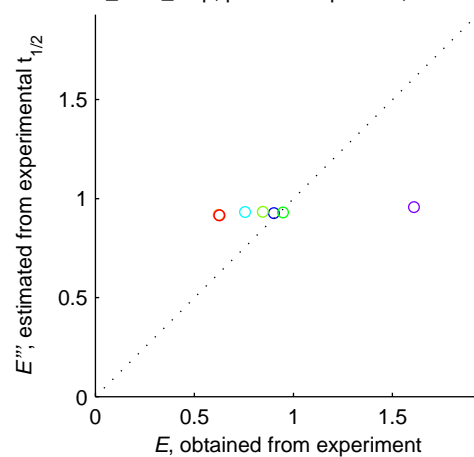
HUVEC_EGF_step, pERK1, peak intensity.



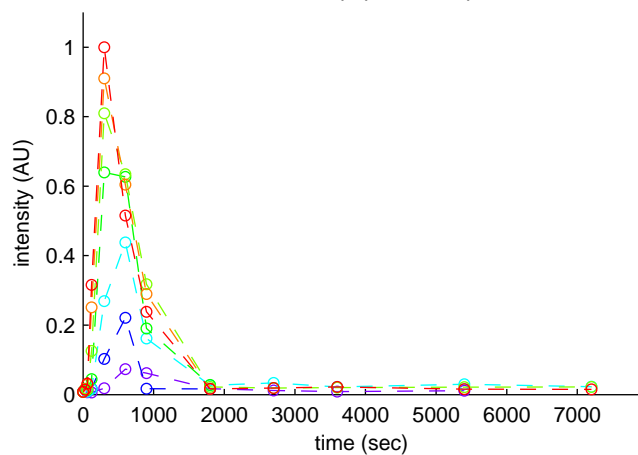
HUVEC_EGF_step, pCREB, peak intensity.



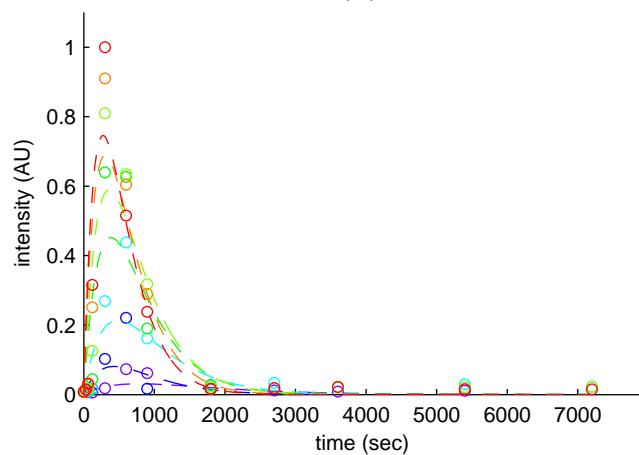
HUVEC_EGF_step, pERK1 \rightarrow pCREB, Efficiency (E).



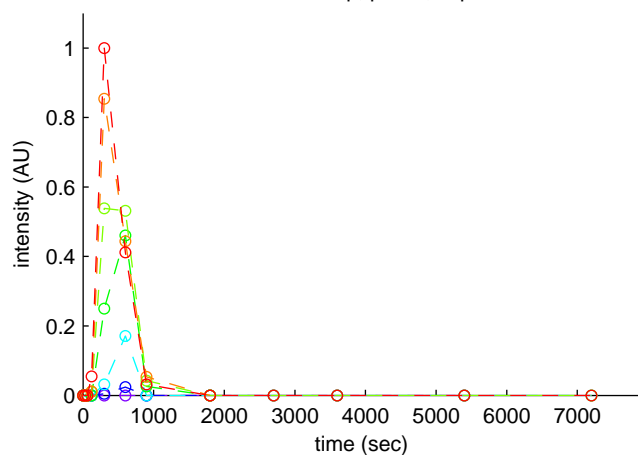
HUVEC_EGF_step, pERK2, experiment.



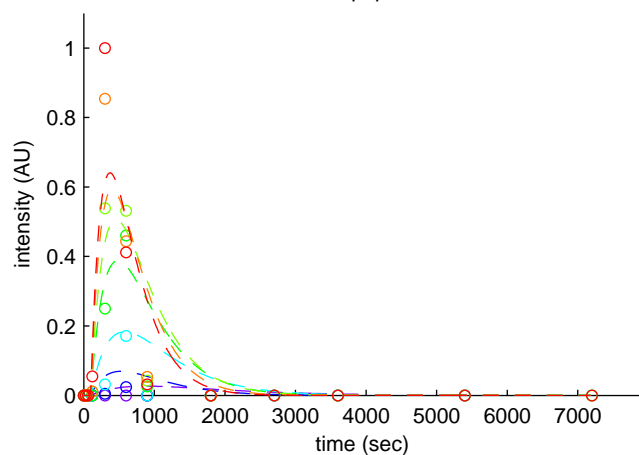
HUVEC_EGF_step, pERK2, simulation.



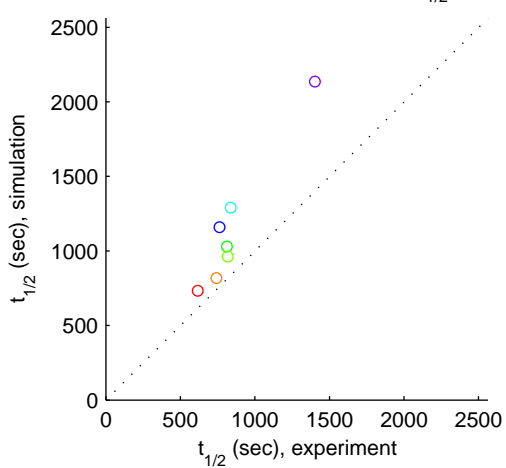
HUVEC_EGF_step, pRSK, experiment.



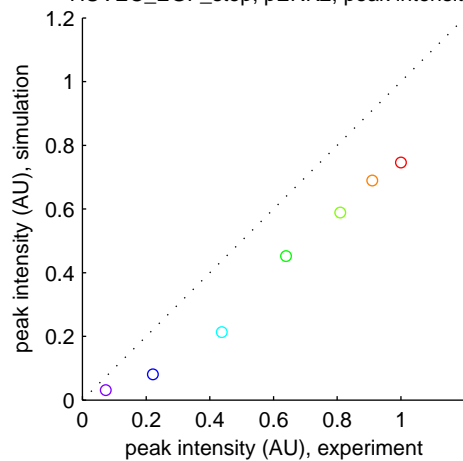
HUVEC_EGF_step, pRSK, simulation.



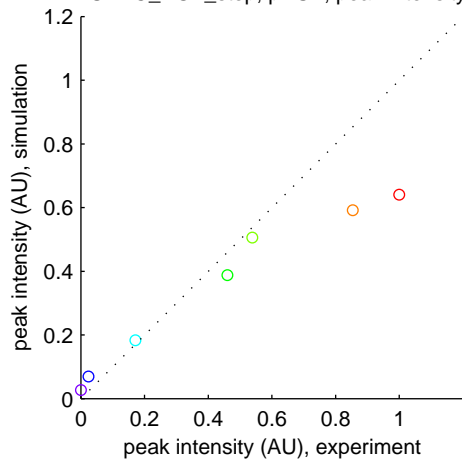
HUVEC_EGF_step, pERK2, $t_{1/2}$



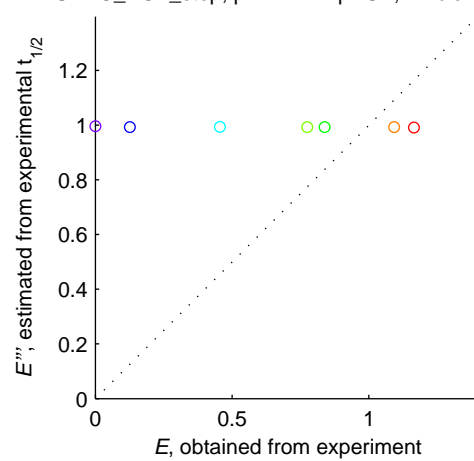
HUVEC_EGF_step, pERK2, peak intensity.



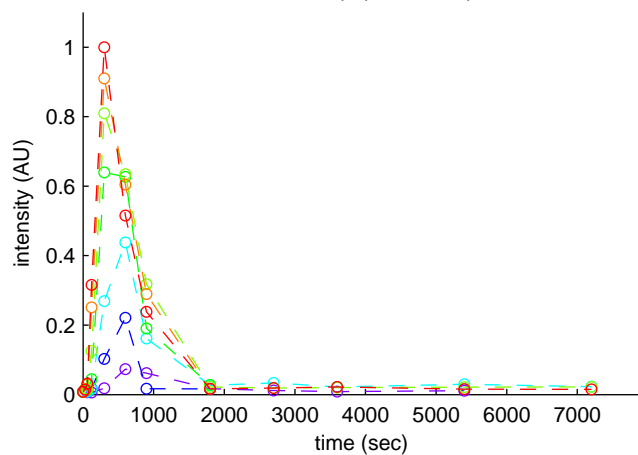
HUVEC_EGF_step, pRSK, peak intensity.



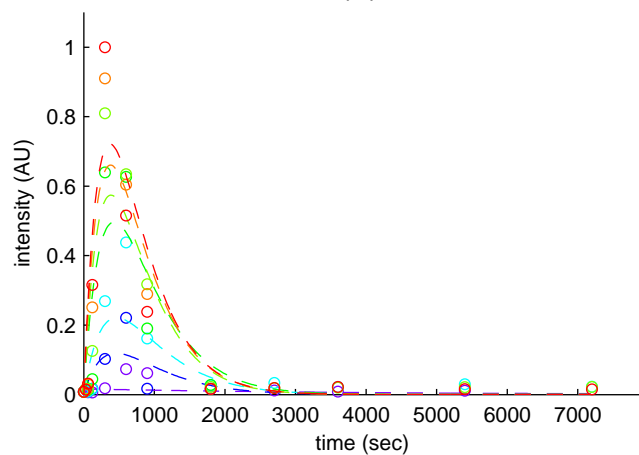
HUVEC_EGF_step, pERK2 \rightarrow pRSK, Efficiency (E).



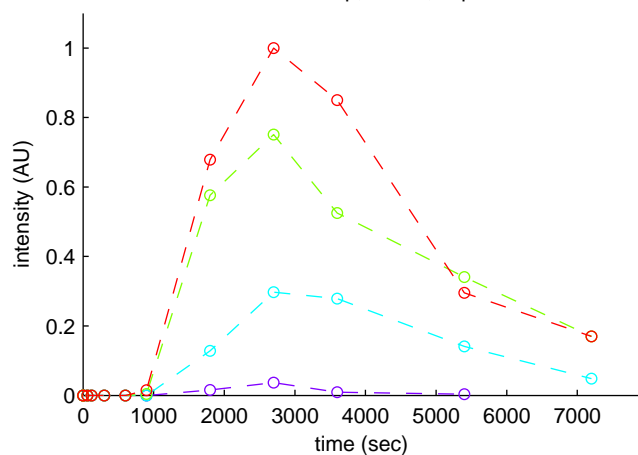
HUVEC_EGF_step, pERK2, experiment.



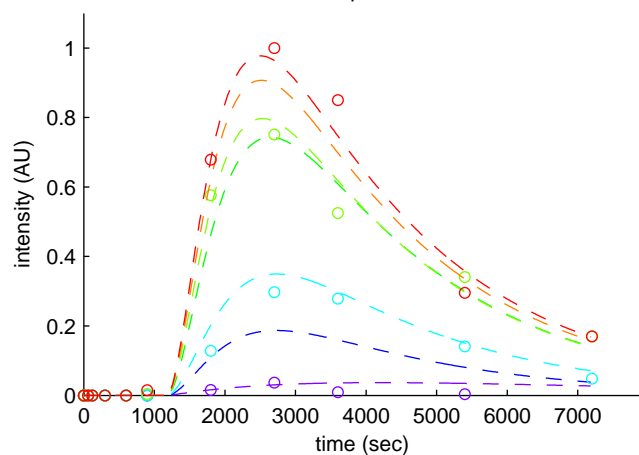
HUVEC_EGF_step, pERK2, simulation.



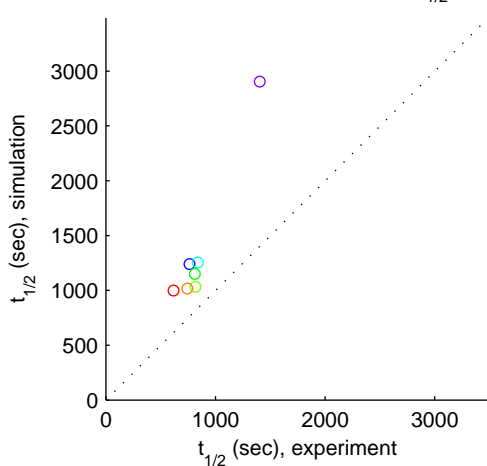
HUVEC_EGF_step, EGR1, experiment.



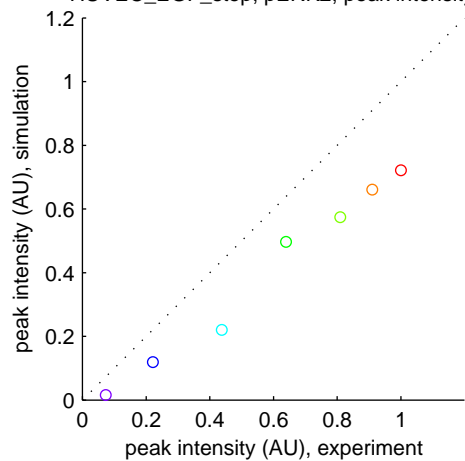
HUVEC_EGF_step, EGR1, simulation.



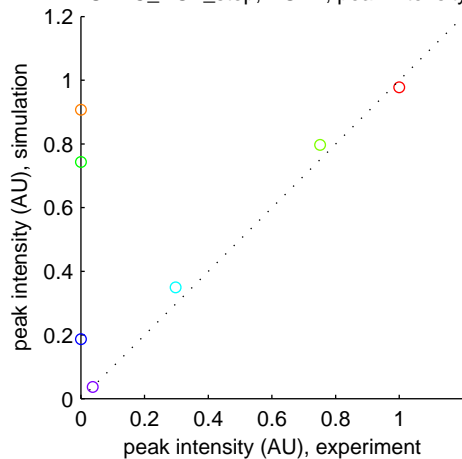
HUVEC_EGF_step, pERK2, $t_{1/2}$



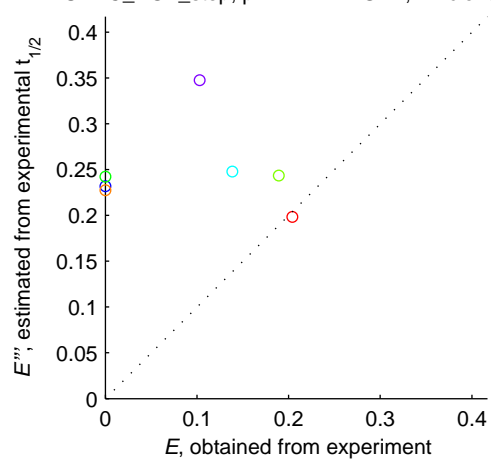
HUVEC_EGF_step, pERK2, peak intensity.



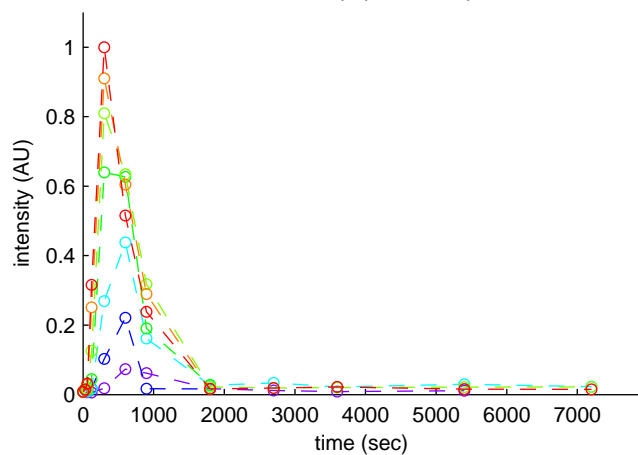
HUVEC_EGF_step, EGR1, peak intensity.



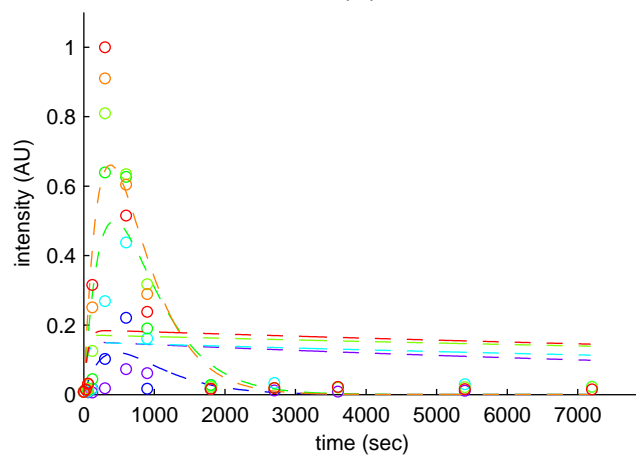
HUVEC_EGF_step, pERK2 \rightarrow EGR1, Efficiency (E).



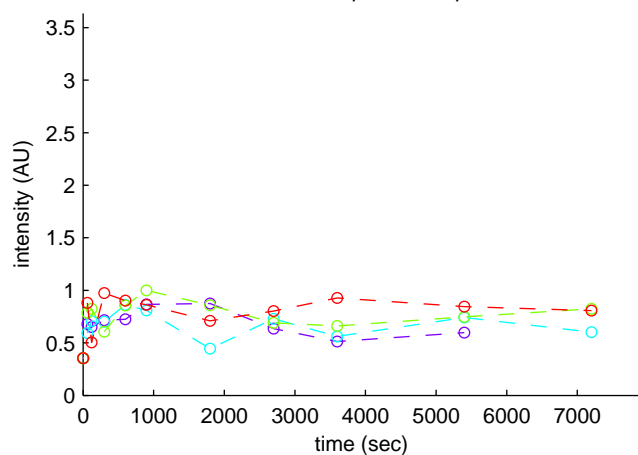
HUVEC_EGF_step, pERK2, experiment.



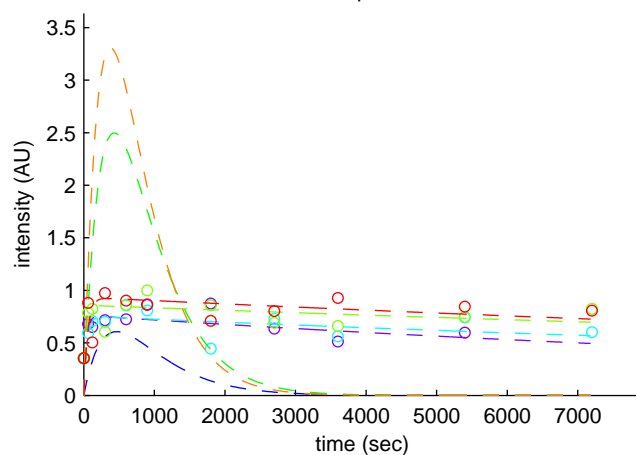
HUVEC_EGF_step, pERK2, simulation.



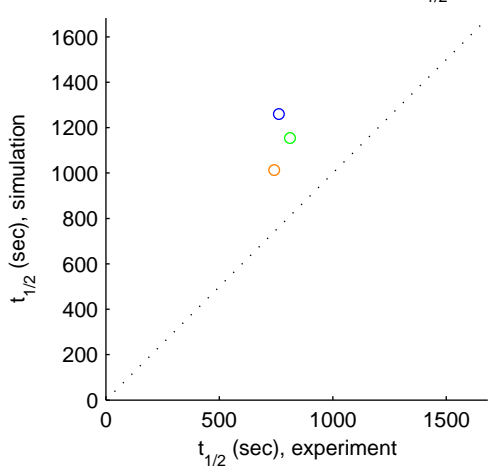
HUVEC_EGF_step, cJun, experiment.



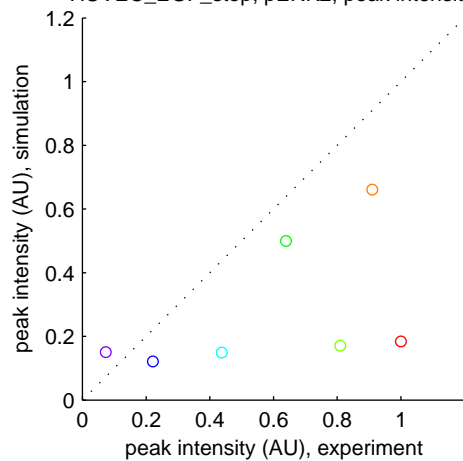
HUVEC_EGF_step, cJun, simulation.



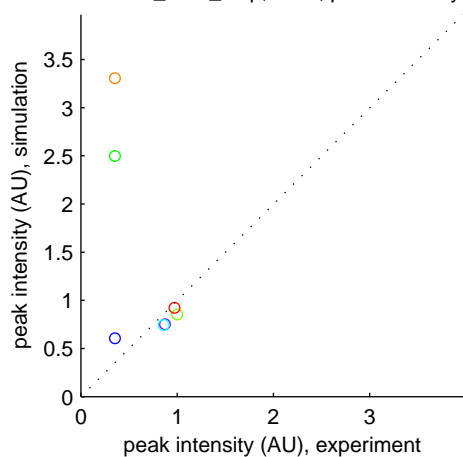
HUVEC_EGF_step, pERK2, $t_{1/2}$



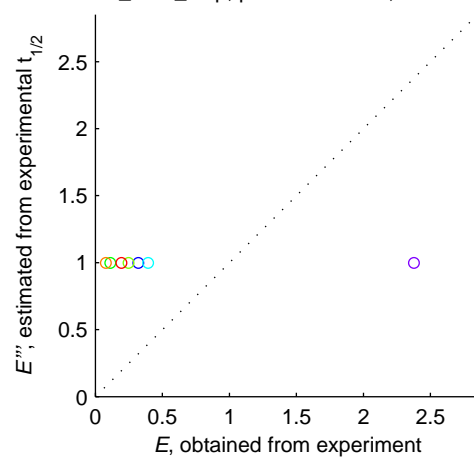
HUVEC_EGF_step, pERK2, peak intensity.



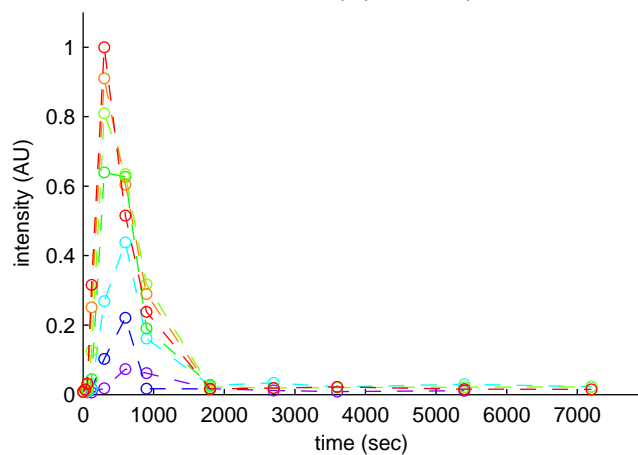
HUVEC_EGF_step, cJun, peak intensity.



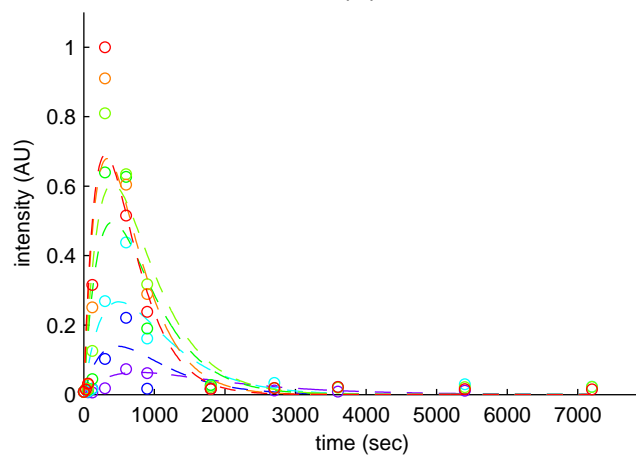
HUVEC_EGF_step, pERK2 \rightarrow cJun, Efficiency (E).



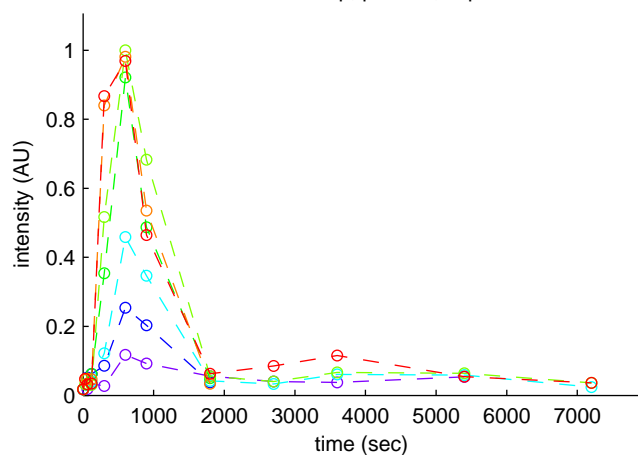
HUVEC_EGF_step, pERK2, experiment.



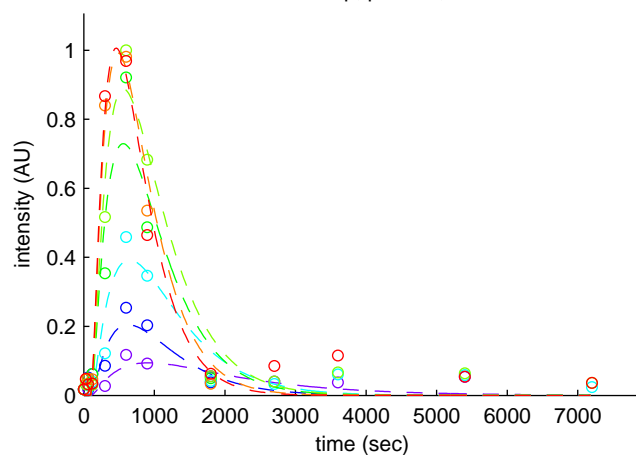
HUVEC_EGF_step, pERK2, simulation.



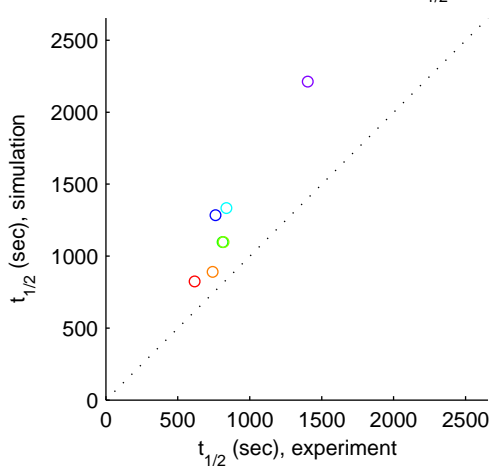
HUVEC_EGF_step, pCREB, experiment.



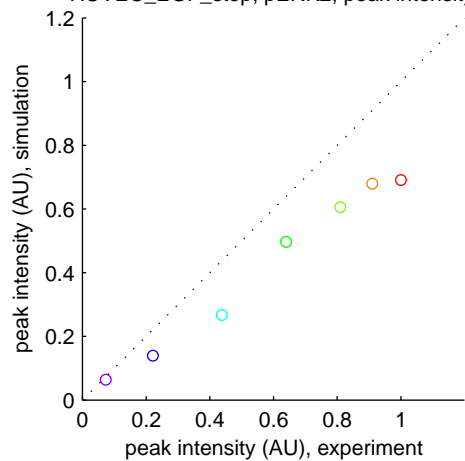
HUVEC_EGF_step, pCREB, simulation.



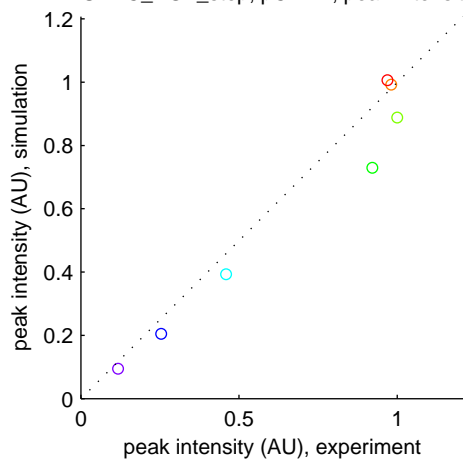
HUVEC_EGF_step, pERK2, $t_{1/2}$



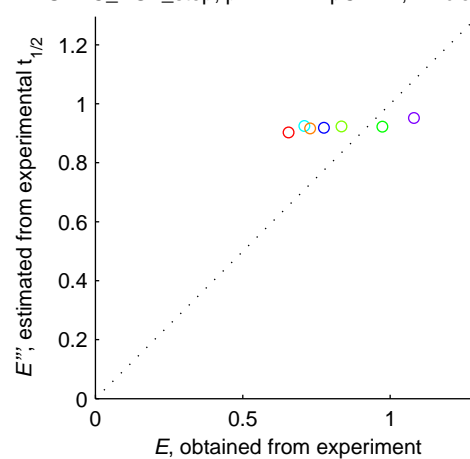
HUVEC_EGF_step, pERK2, peak intensity.

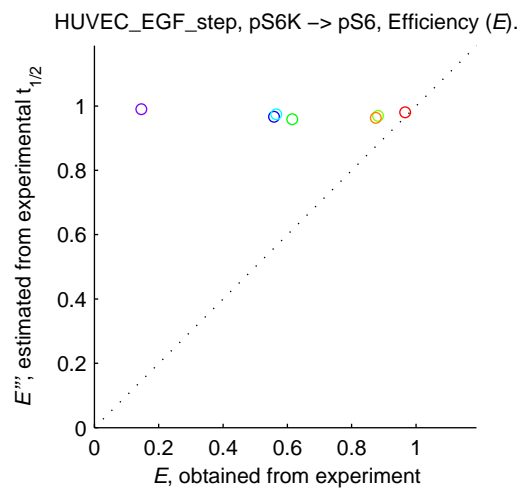
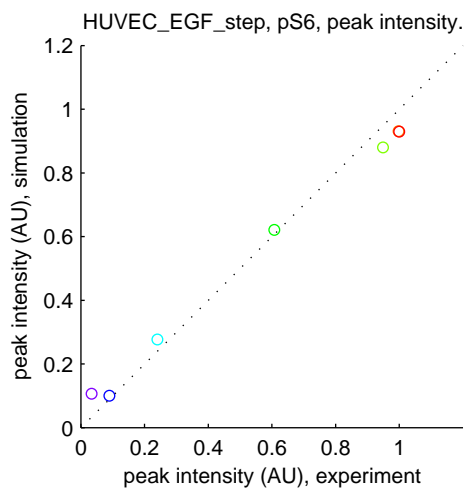
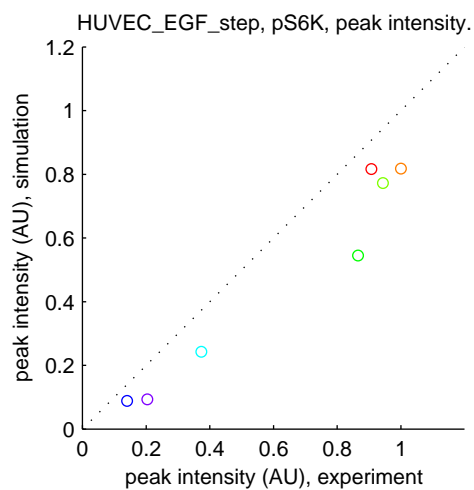
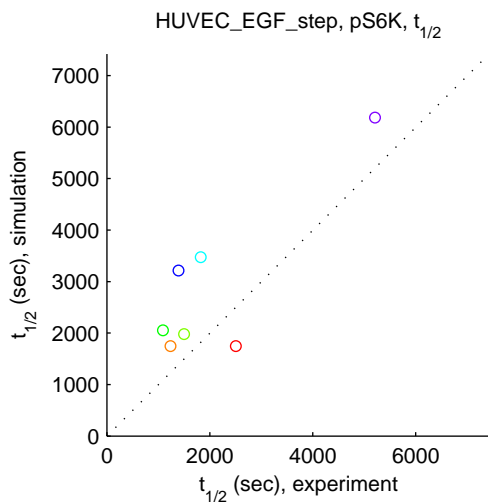
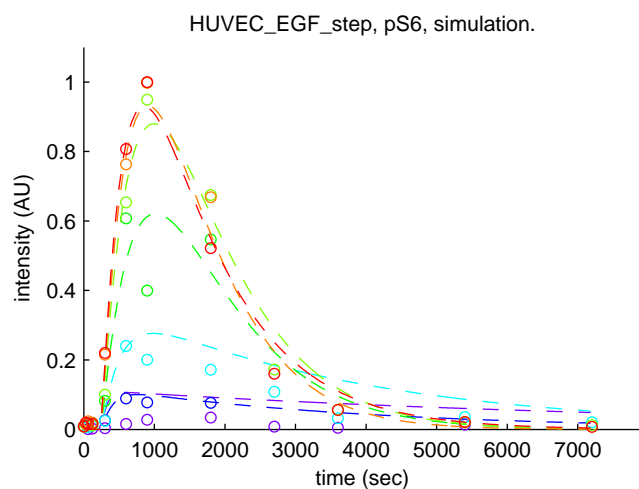
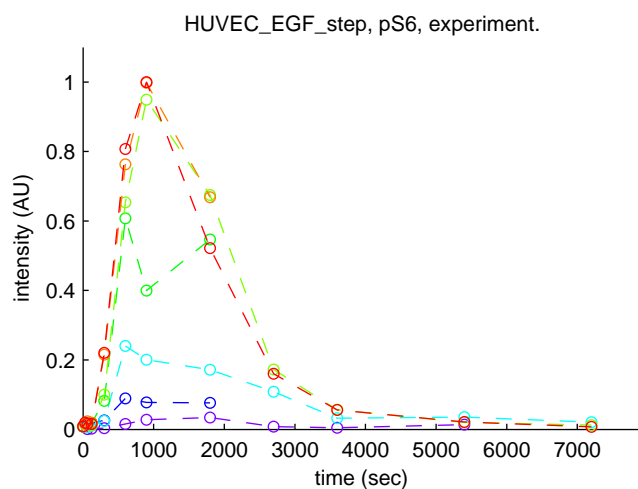
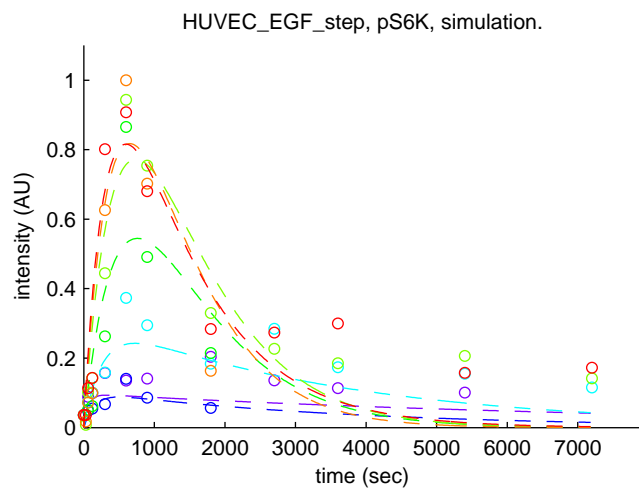
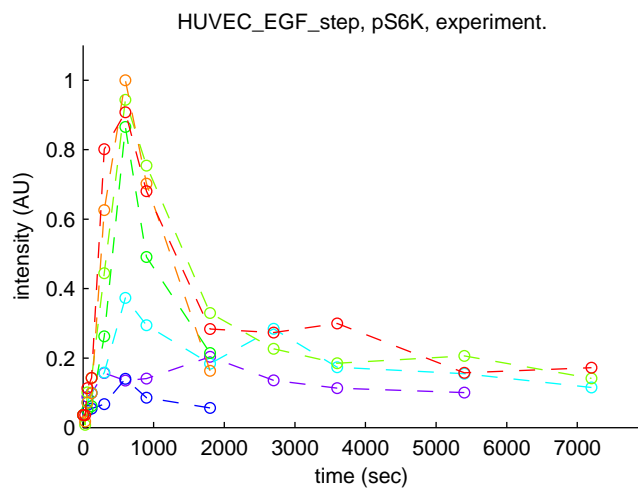


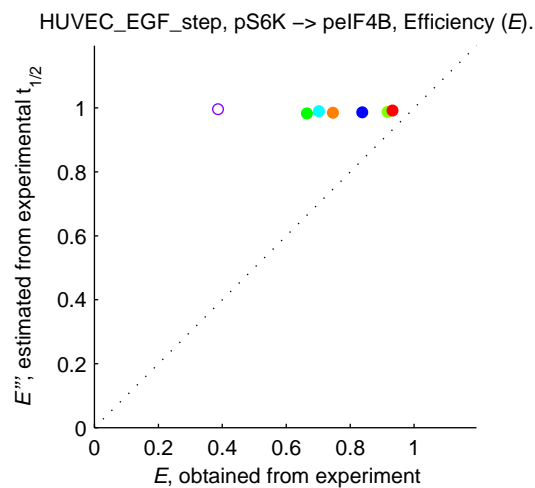
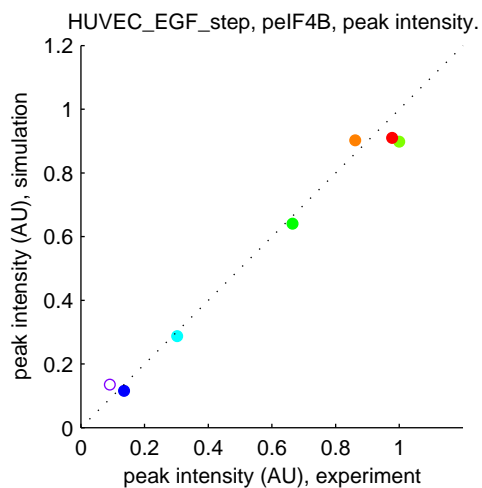
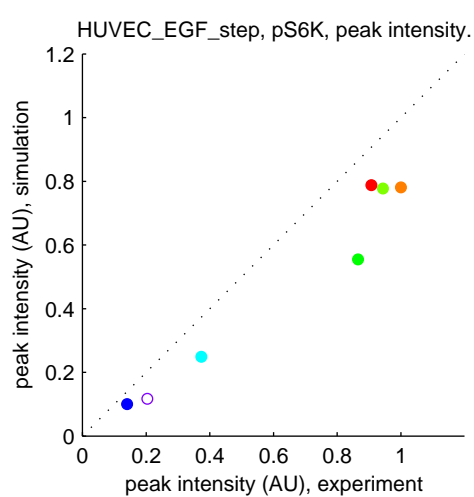
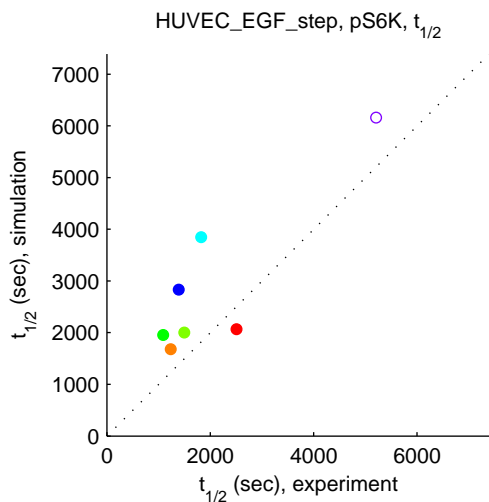
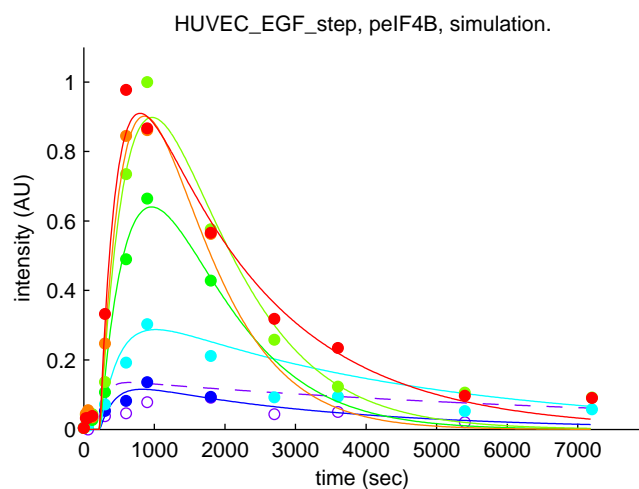
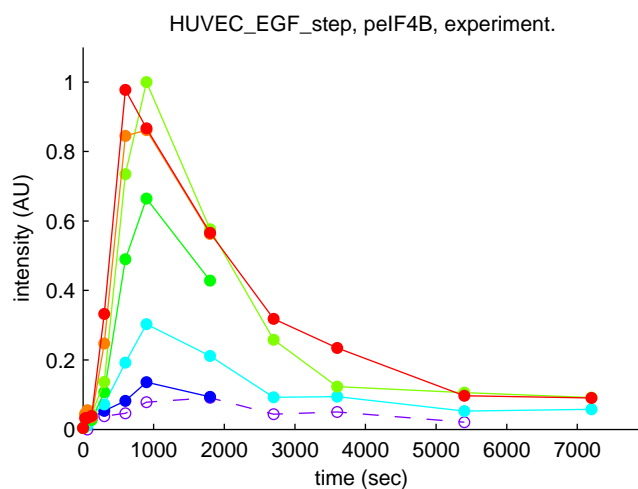
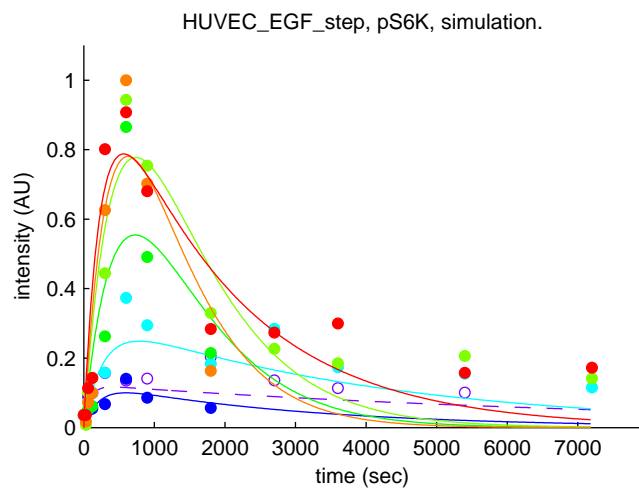
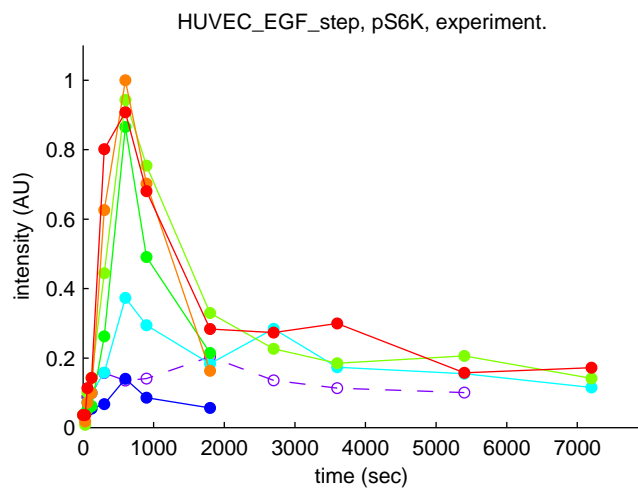
HUVEC_EGF_step, pCREB, peak intensity.

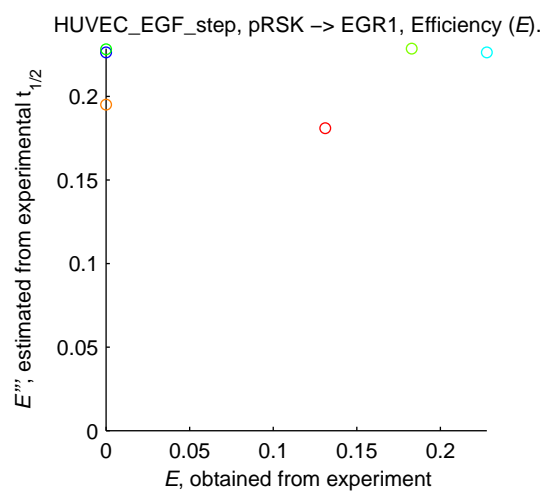
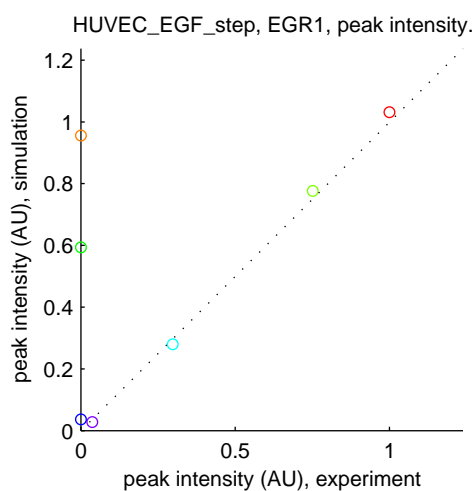
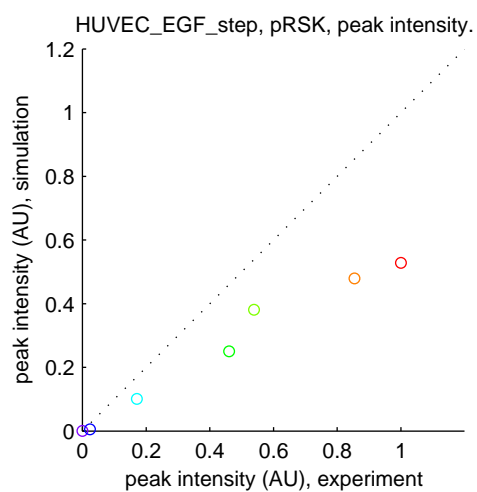
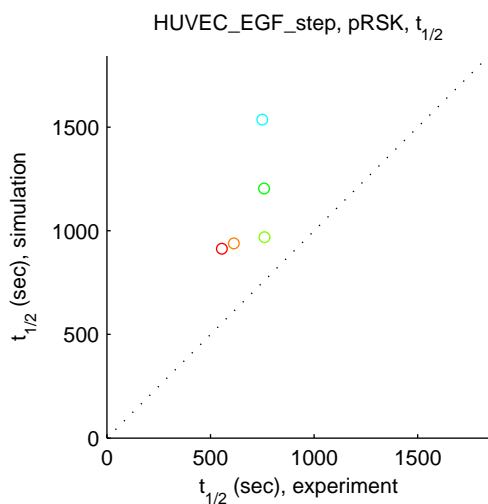
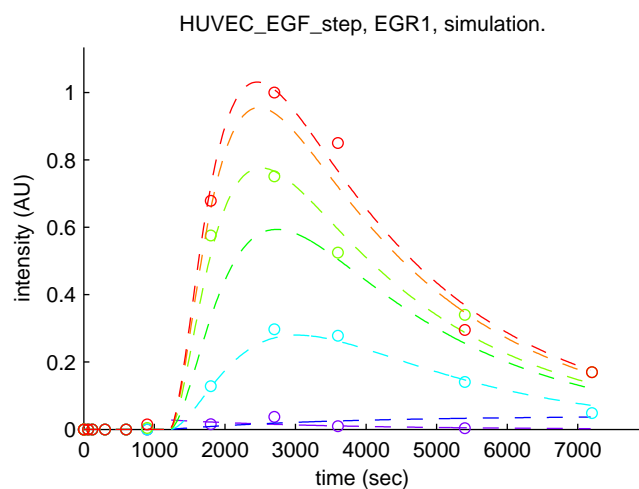
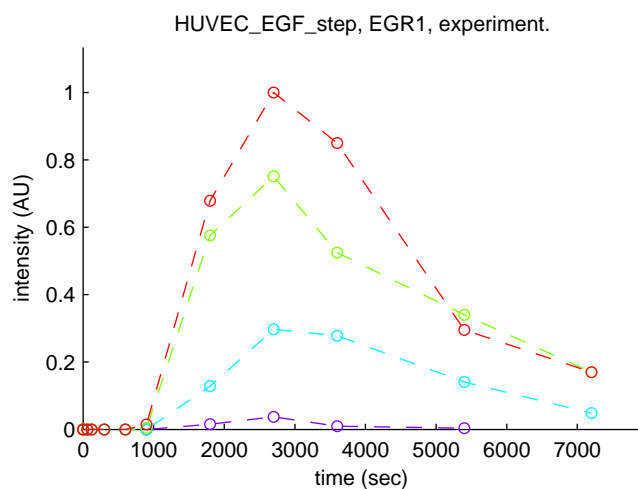
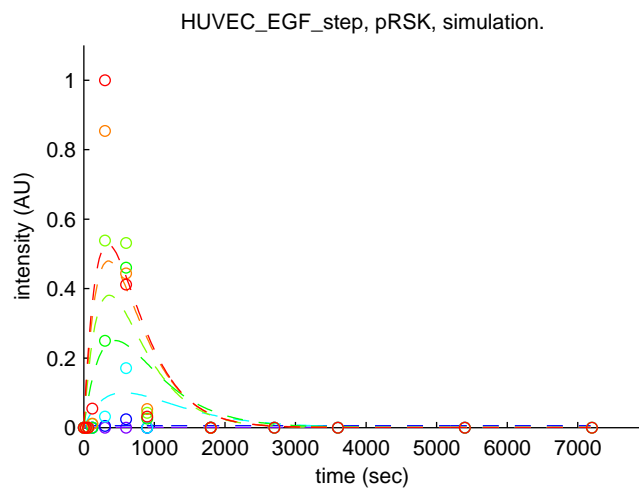
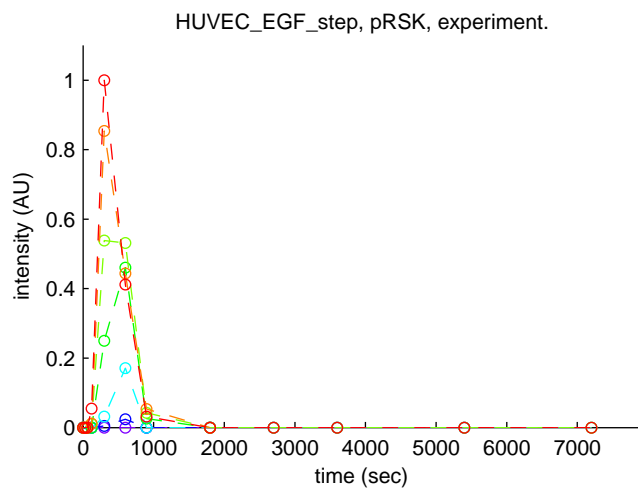


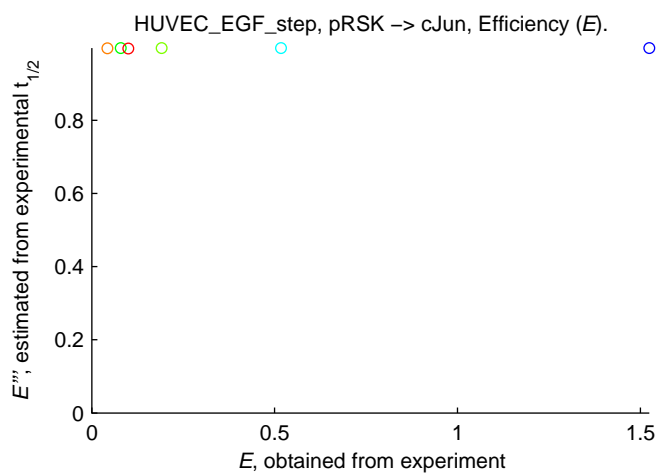
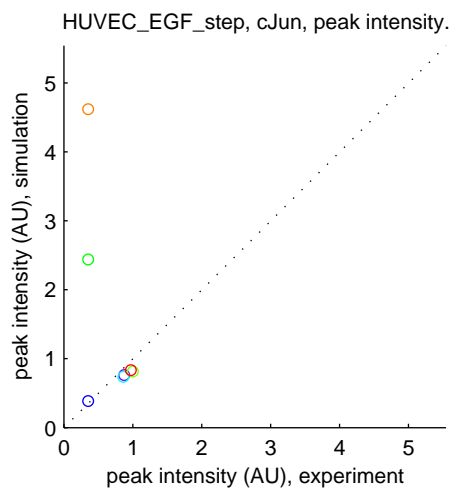
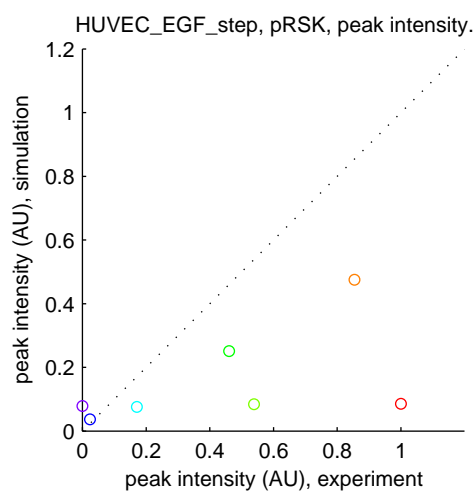
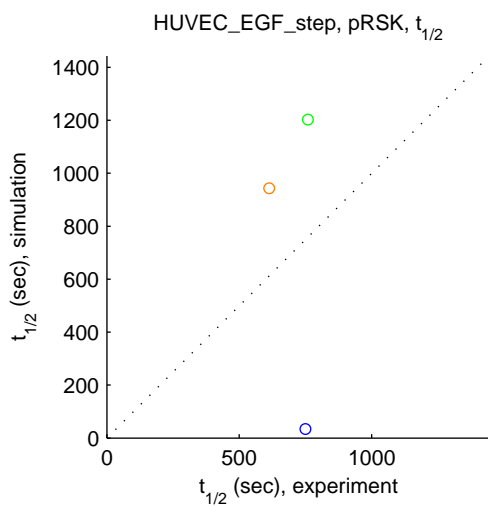
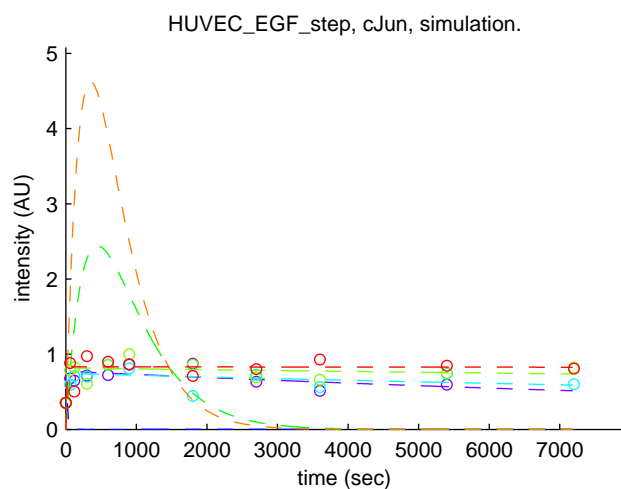
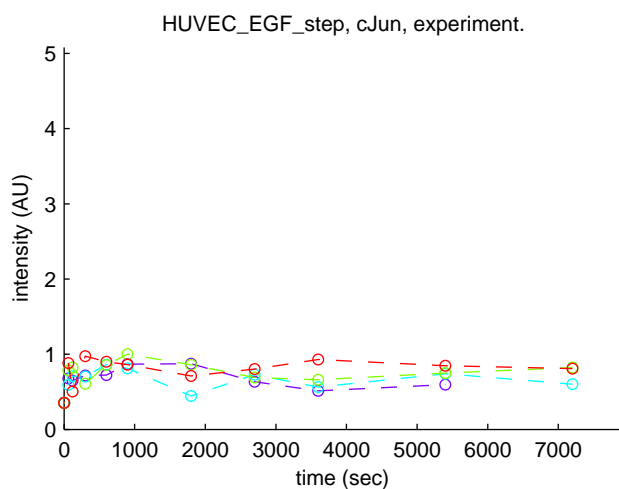
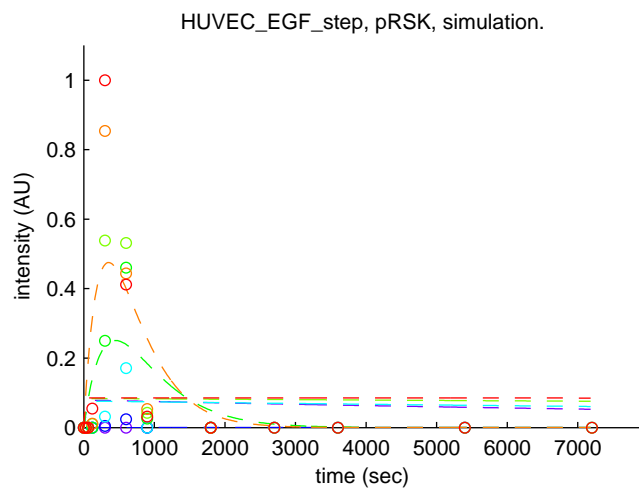
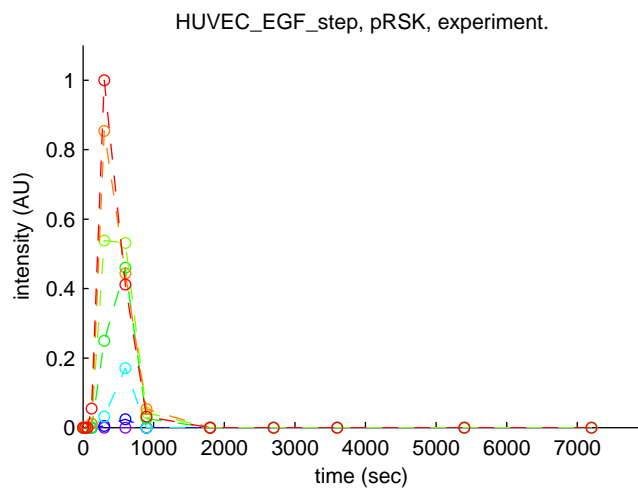
HUVEC_EGF_step, pERK2 \rightarrow pCREB, Efficiency (E).

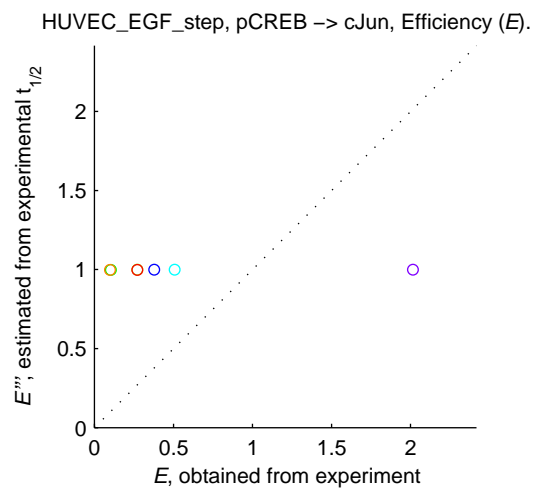
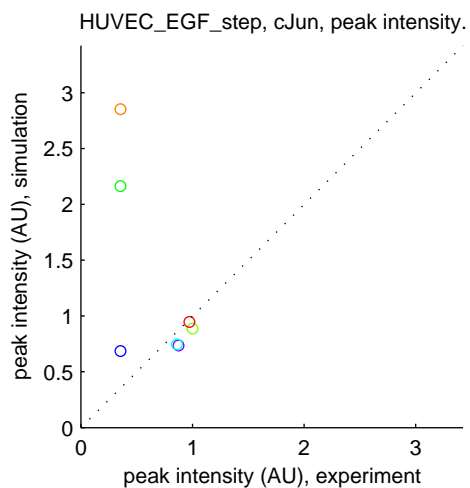
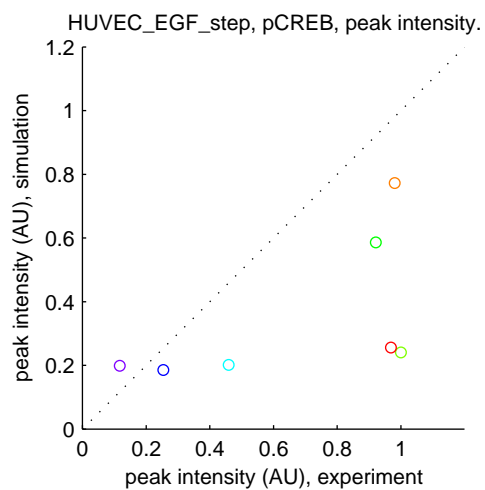
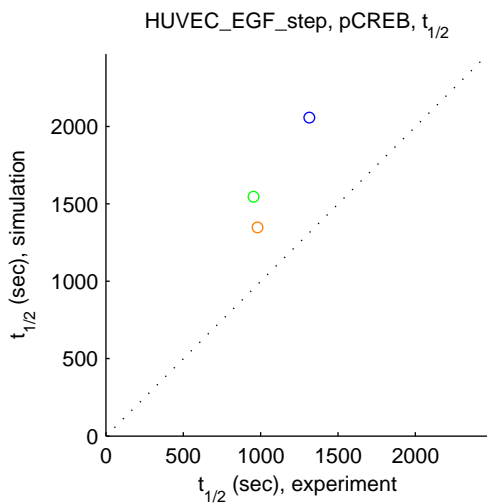
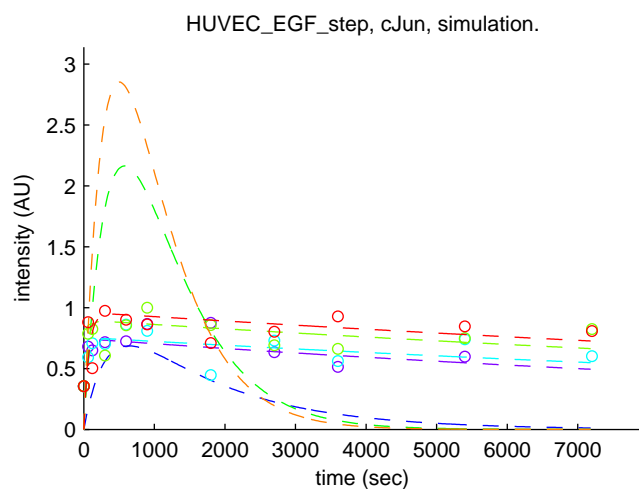
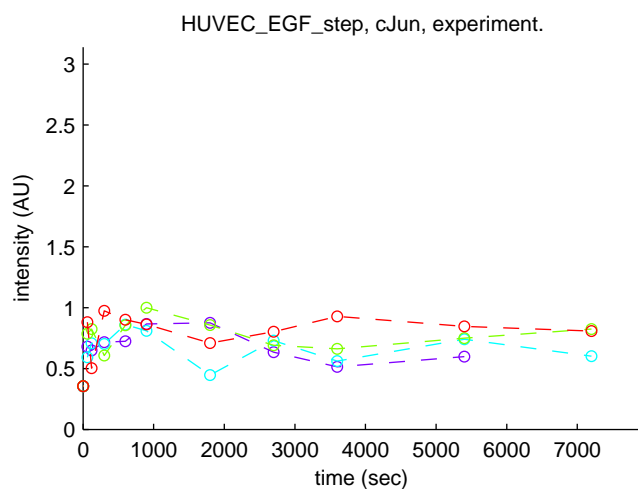
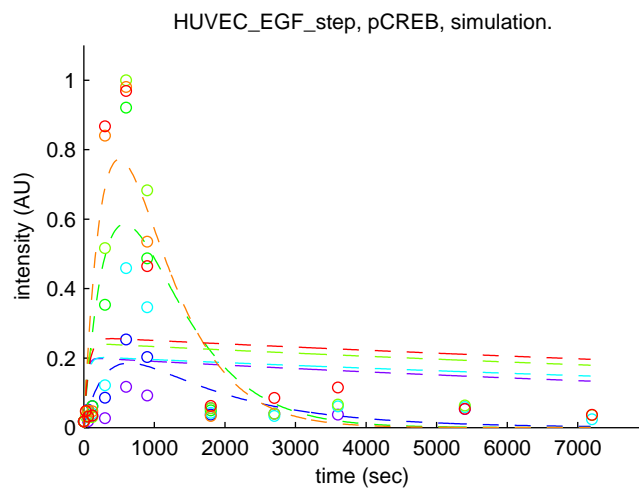
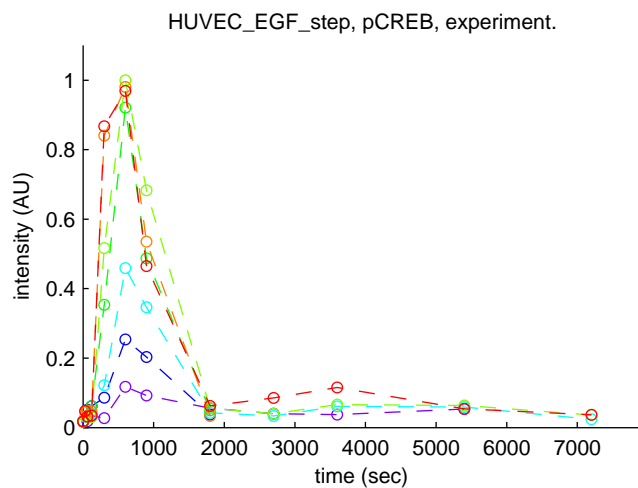




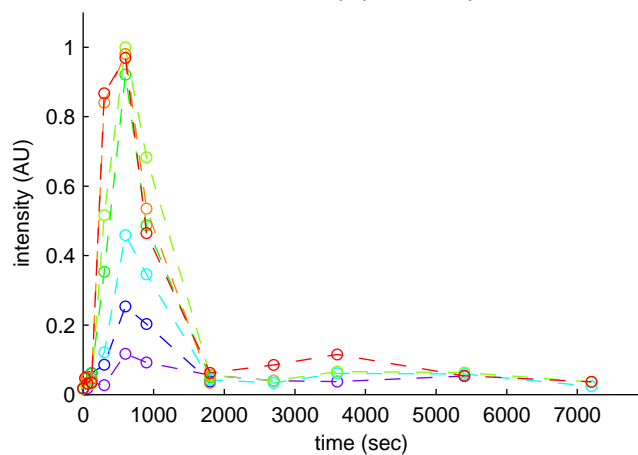




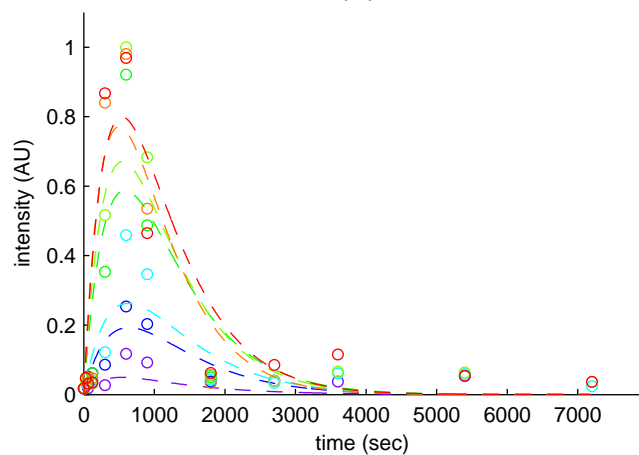




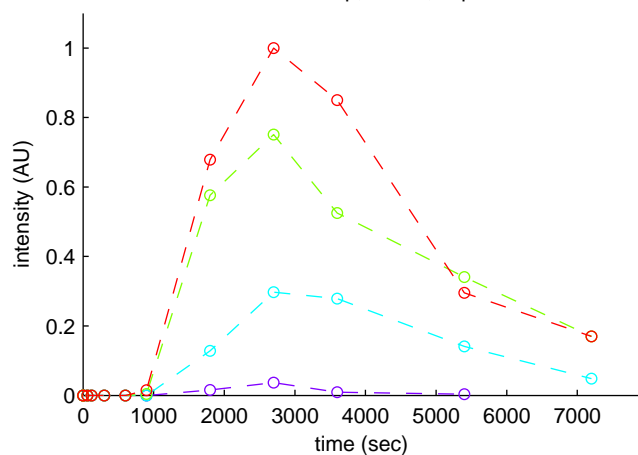
HUVEC_EGF_step, pCREB, experiment.



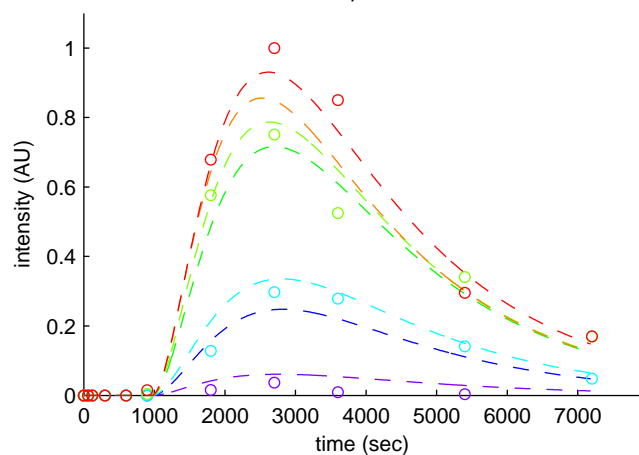
HUVEC_EGF_step, pCREB, simulation.



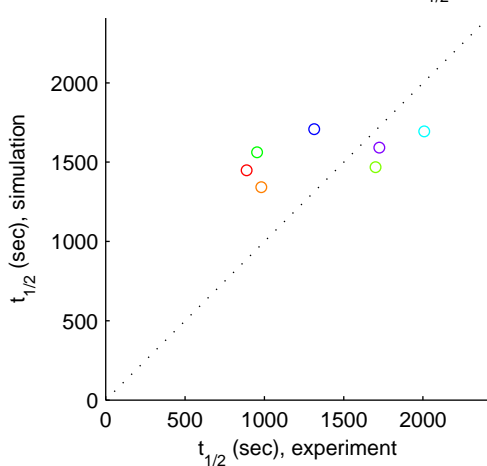
HUVEC_EGF_step, EGR1, experiment.



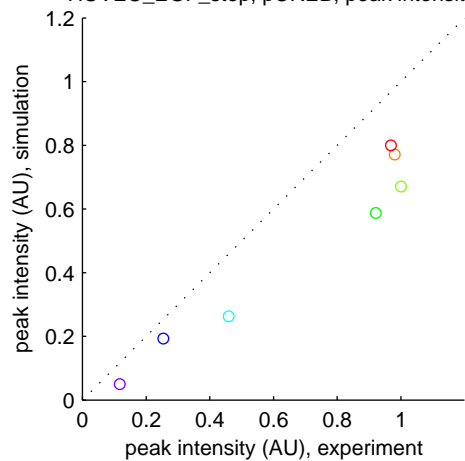
HUVEC_EGF_step, EGR1, simulation.



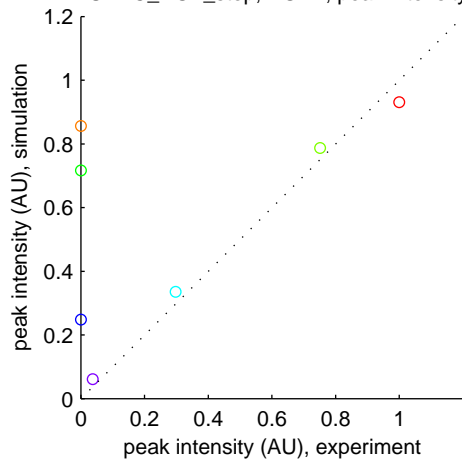
HUVEC_EGF_step, pCREB, $t_{1/2}$



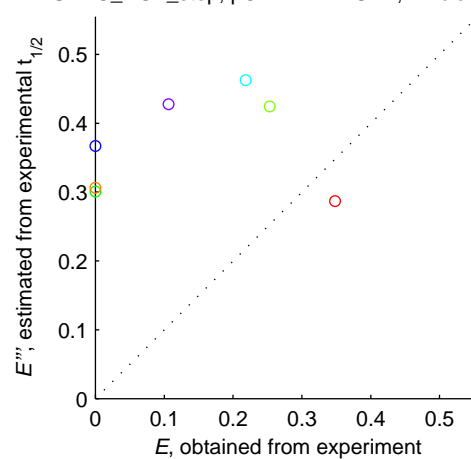
HUVEC_EGF_step, pCREB, peak intensity.



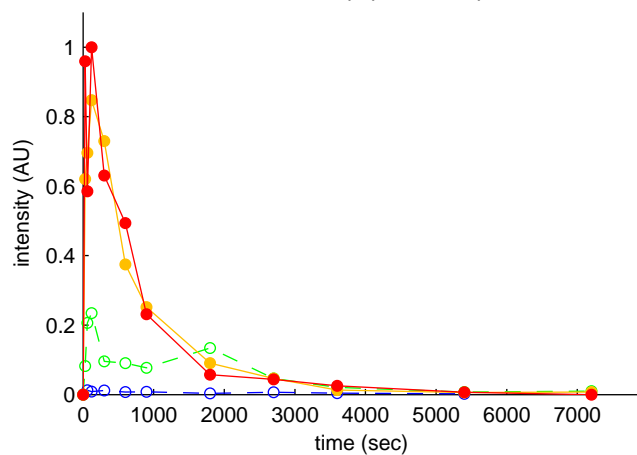
HUVEC_EGF_step, EGR1, peak intensity.



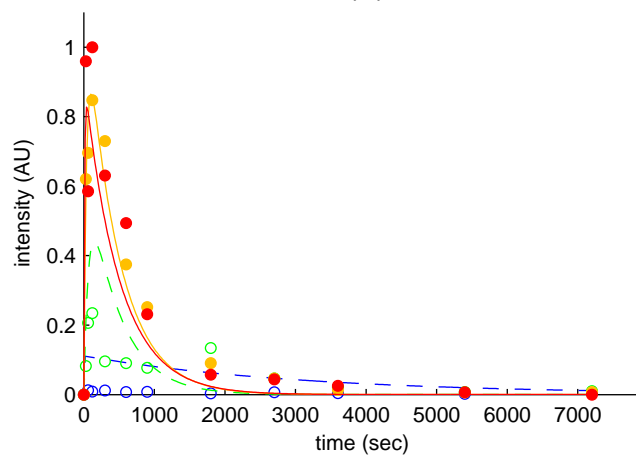
HUVEC_EGF_step, pCREB \rightarrow EGR1, Efficiency (E).



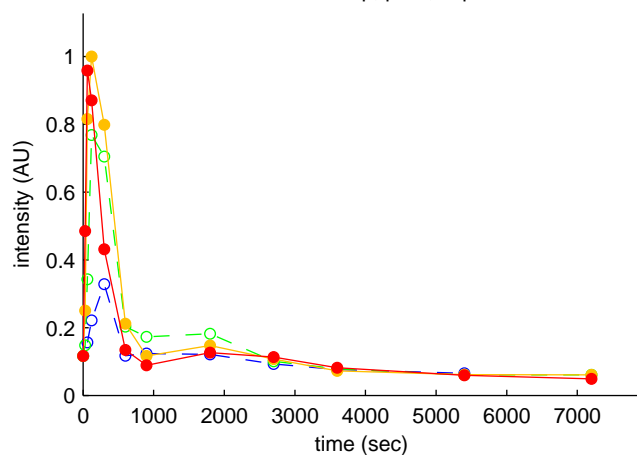
Swiss3T3_EGF_step, pEGFR, experiment.



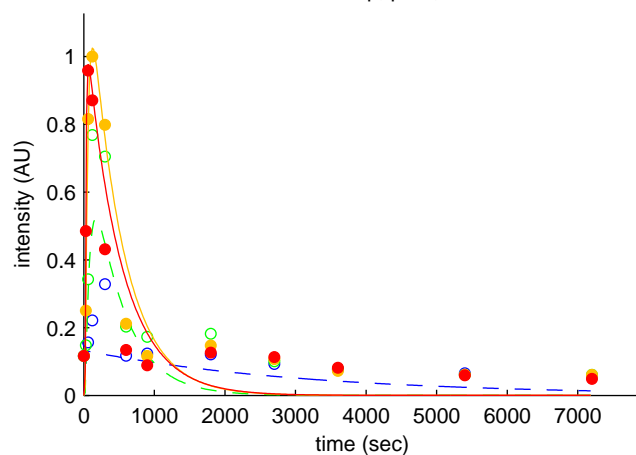
Swiss3T3_EGF_step, pEGFR, simulation.



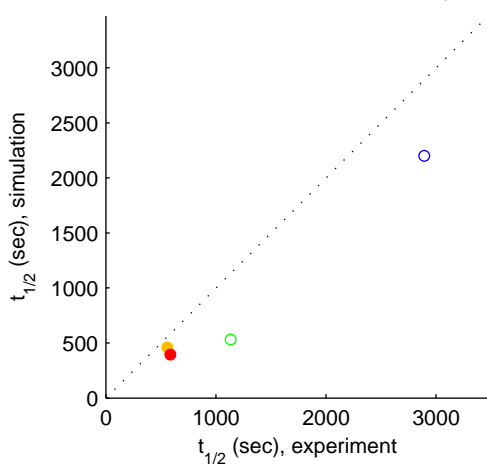
Swiss3T3_EGF_step, pAkt, experiment.



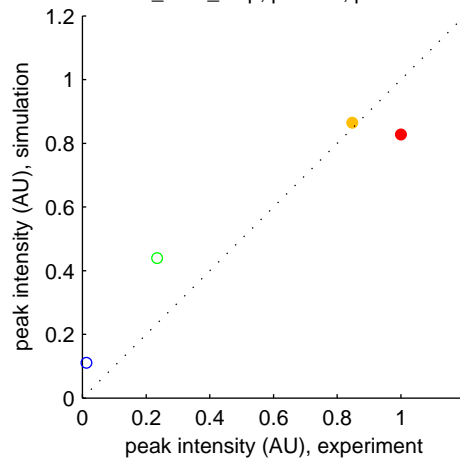
Swiss3T3_EGF_step, pAkt, simulation.



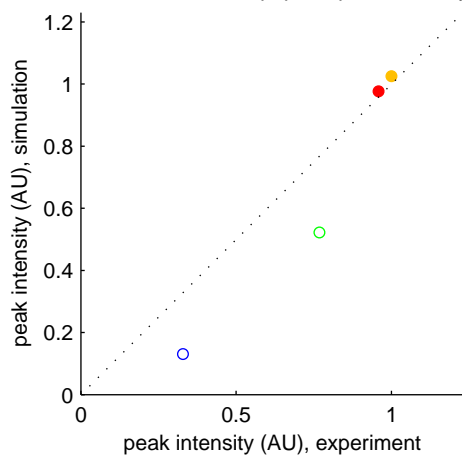
Swiss3T3_EGF_step, pEGFR, $t_{1/2}$



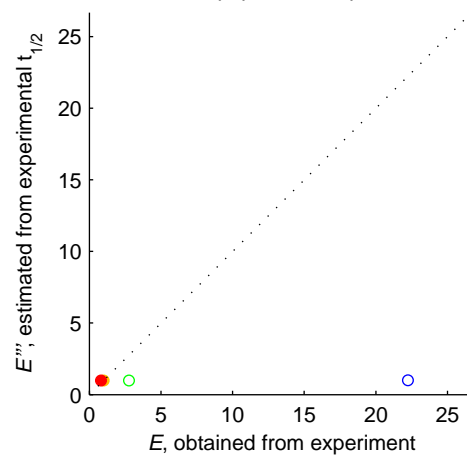
Swiss3T3_EGF_step, pEGFR, peak intensity.



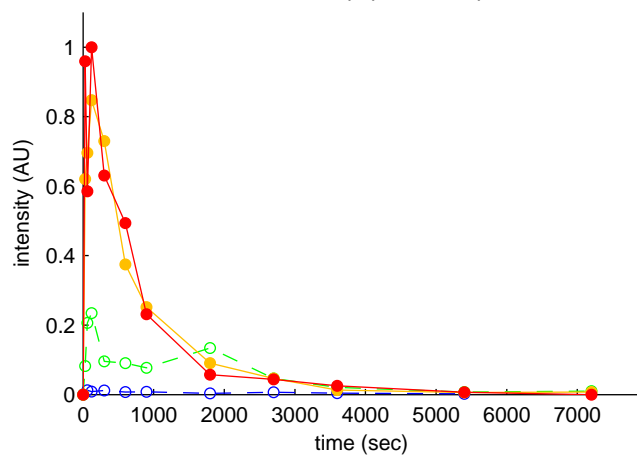
Swiss3T3_EGF_step, pAkt, peak intensity.



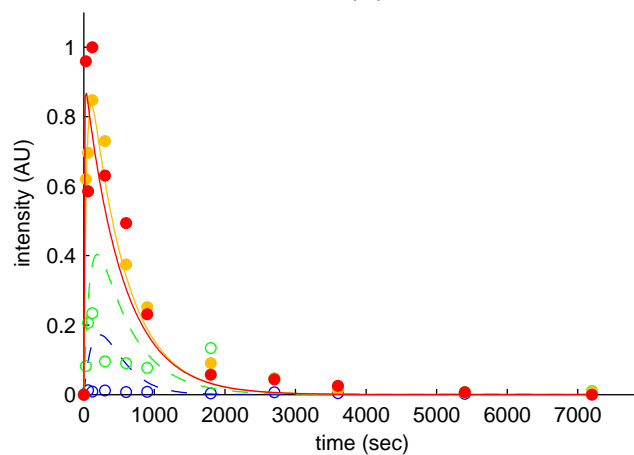
Swiss3T3_EGF_step, pEGFR \rightarrow pAkt, Efficiency (E).



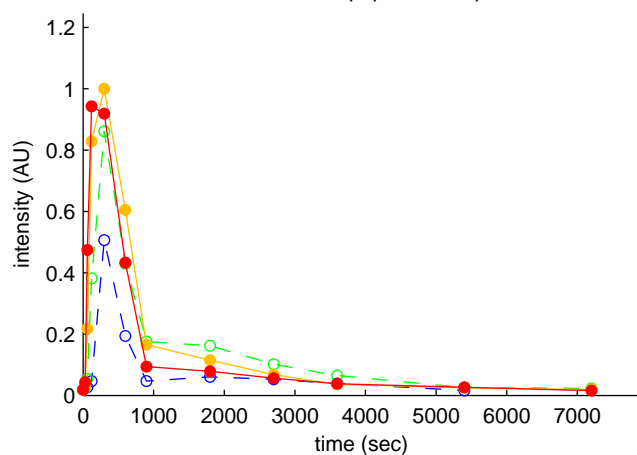
Swiss3T3_EGF_step, pEGFR, experiment.



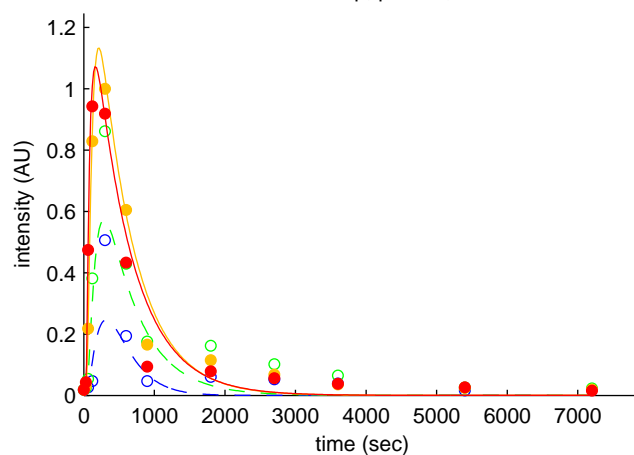
Swiss3T3_EGF_step, pEGFR, simulation.



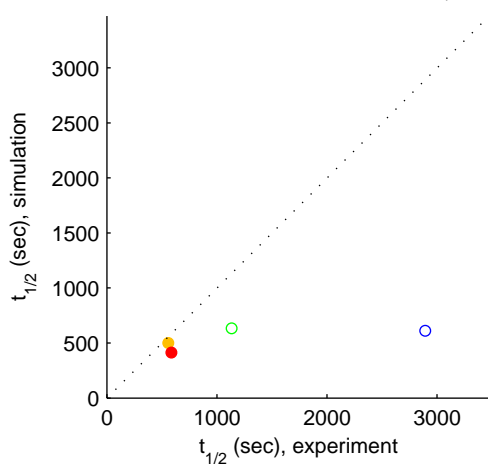
Swiss3T3_EGF_step, pERK1, experiment.



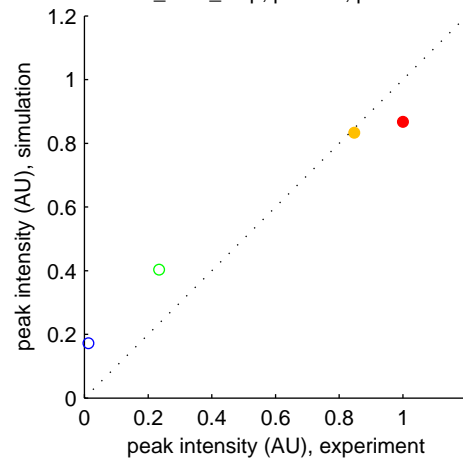
Swiss3T3_EGF_step, pERK1, simulation.



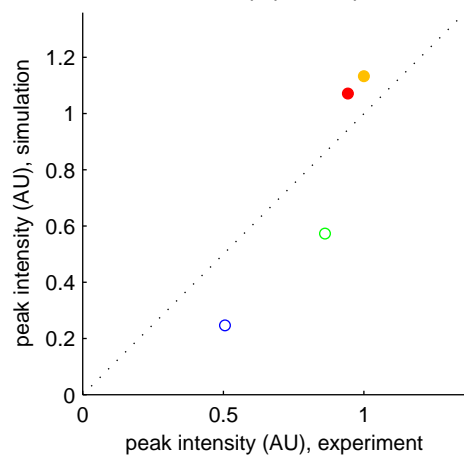
Swiss3T3_EGF_step, pEGFR, $t_{1/2}$



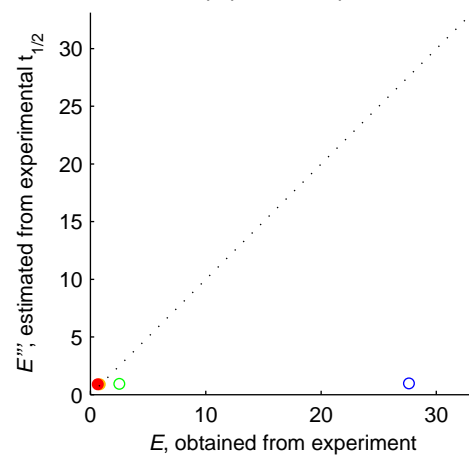
Swiss3T3_EGF_step, pEGFR, peak intensity.



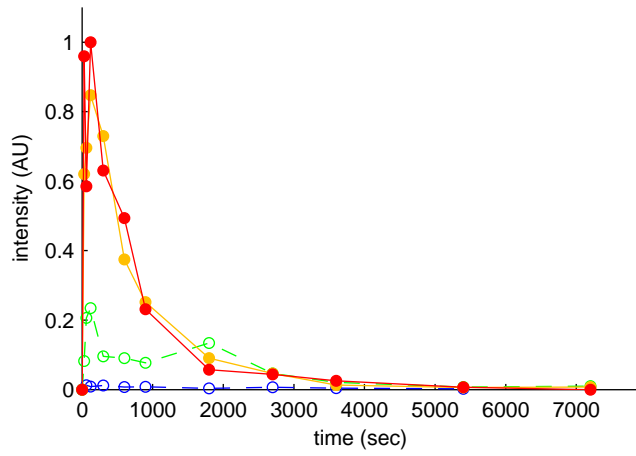
Swiss3T3_EGF_step, pERK1, peak intensity.



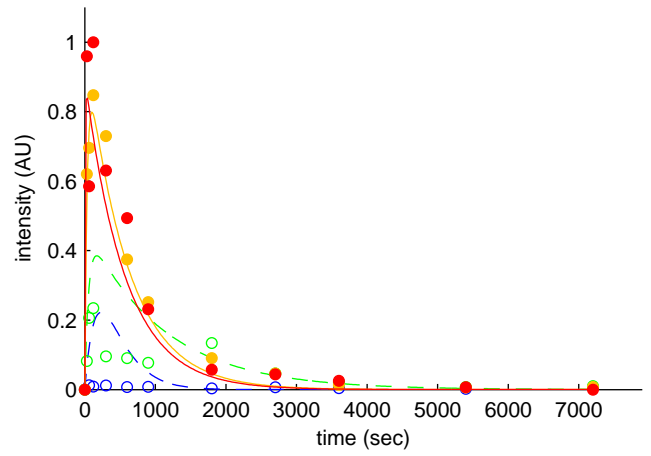
Swiss3T3_EGF_step, pEGFR \rightarrow pERK1, Efficiency (E).



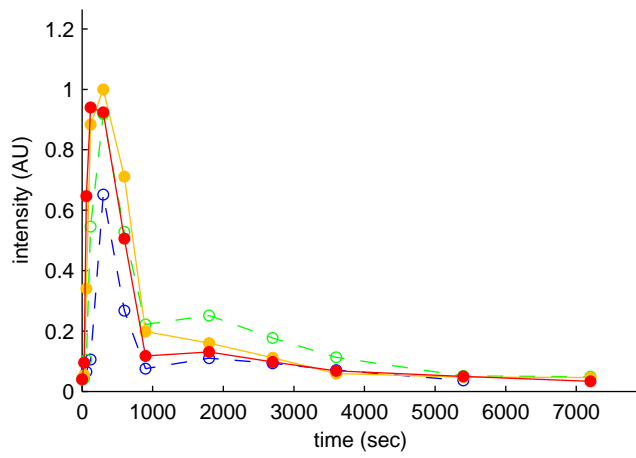
Swiss3T3_EGF_step, pEGFR, experiment.



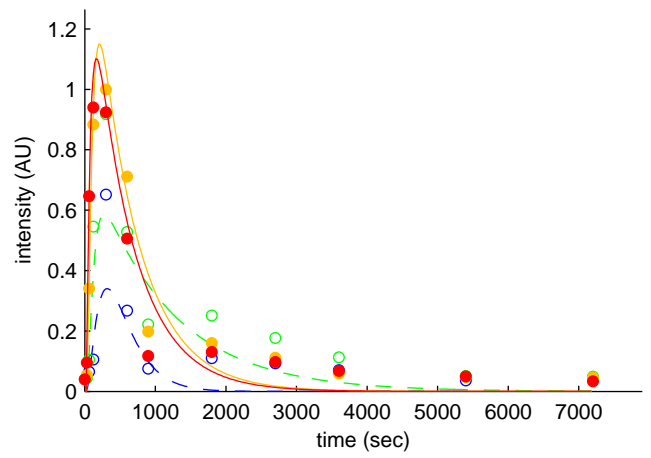
Swiss3T3_EGF_step, pEGFR, simulation.



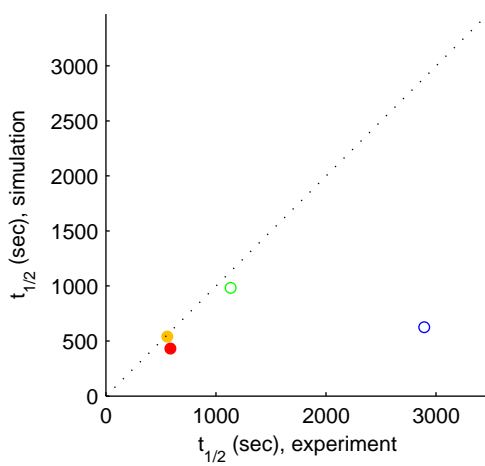
Swiss3T3_EGF_step, pERK2, experiment.



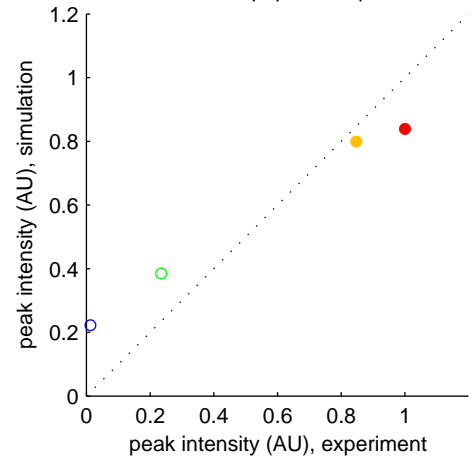
Swiss3T3_EGF_step, pERK2, simulation.



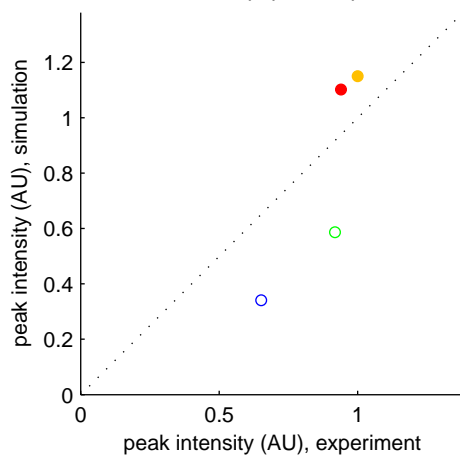
Swiss3T3_EGF_step, pEGFR, $t_{1/2}$



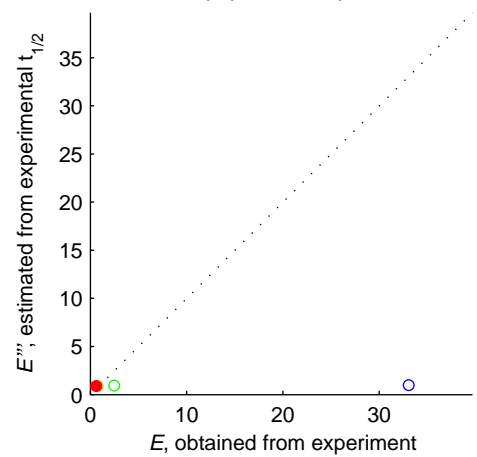
Swiss3T3_EGF_step, pEGFR, peak intensity.



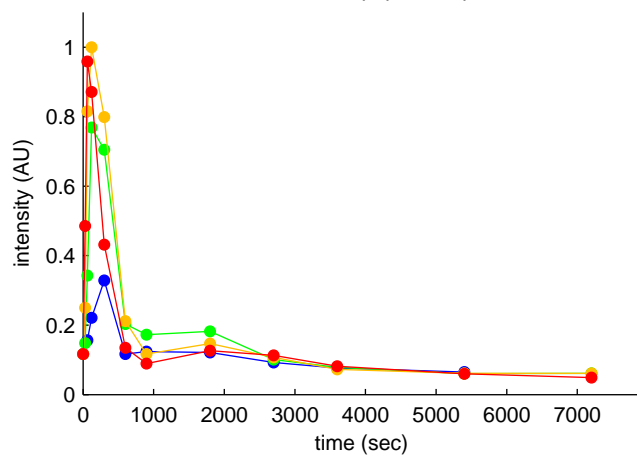
Swiss3T3_EGF_step, pERK2, peak intensity.



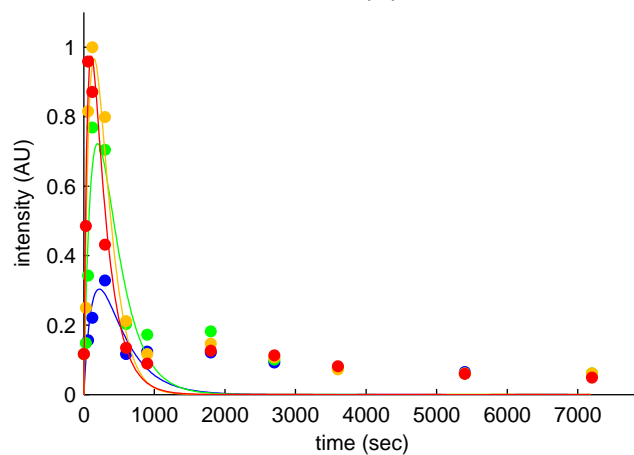
Swiss3T3_EGF_step, pEGFR \rightarrow pERK2, Efficiency (E).



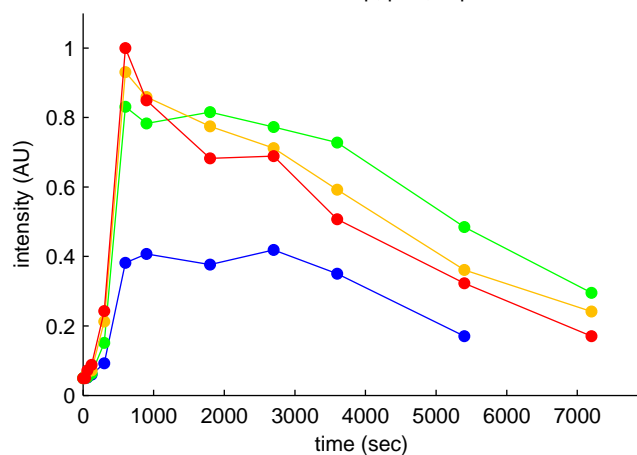
Swiss3T3_EGF_step, pAkt, experiment.



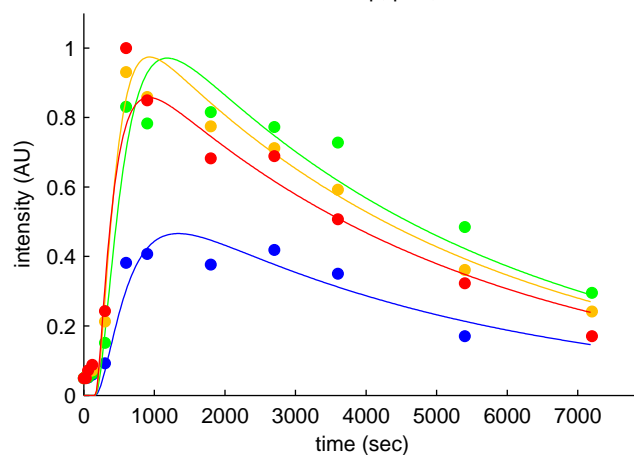
Swiss3T3_EGF_step, pAkt, simulation.



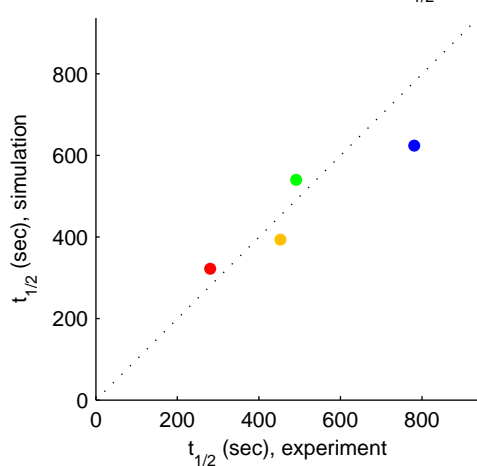
Swiss3T3_EGF_step, pS6, experiment.



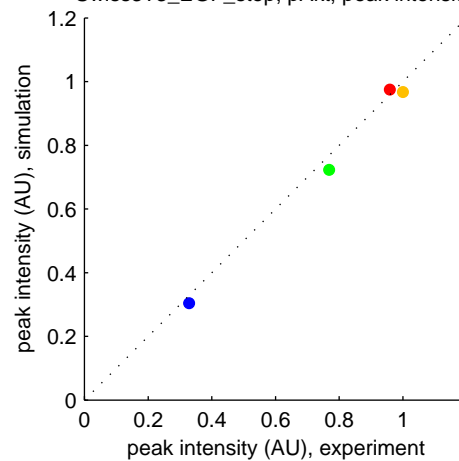
Swiss3T3_EGF_step, pS6, simulation.



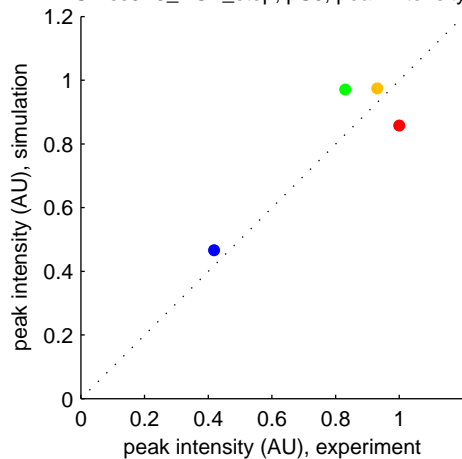
Swiss3T3_EGF_step, pAkt, $t_{1/2}$



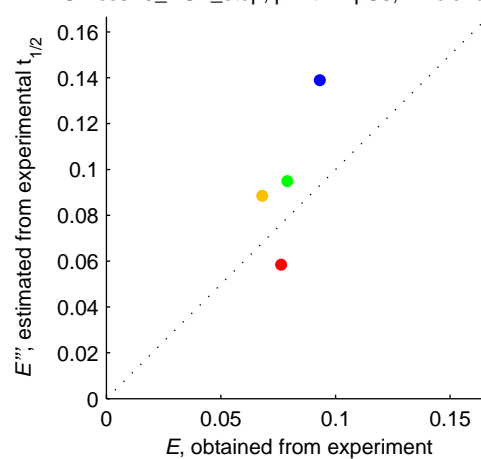
Swiss3T3_EGF_step, pAkt, peak intensity.



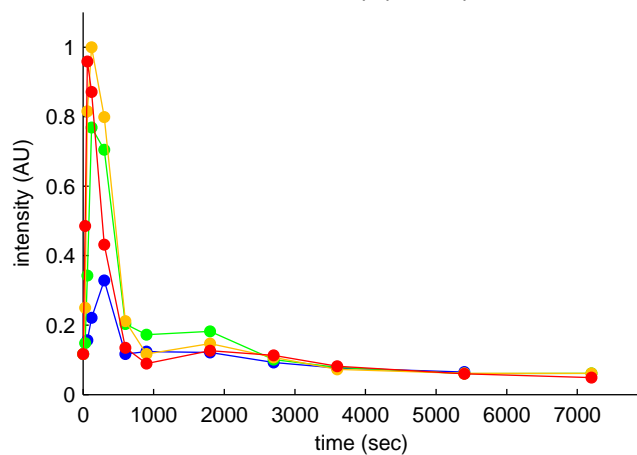
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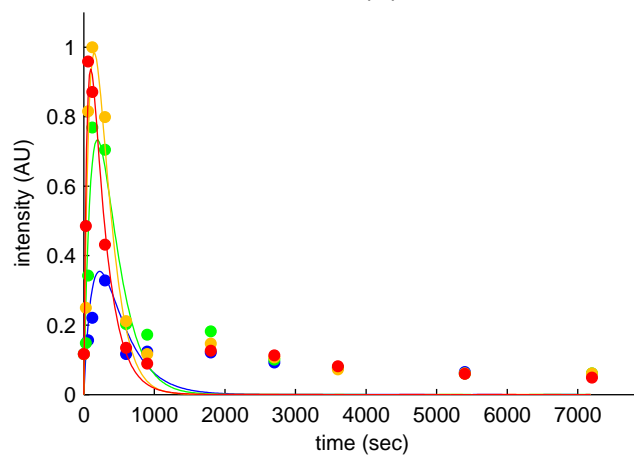
Swiss3T3_EGF_step, pAkt \rightarrow pS6, Efficiency (E).



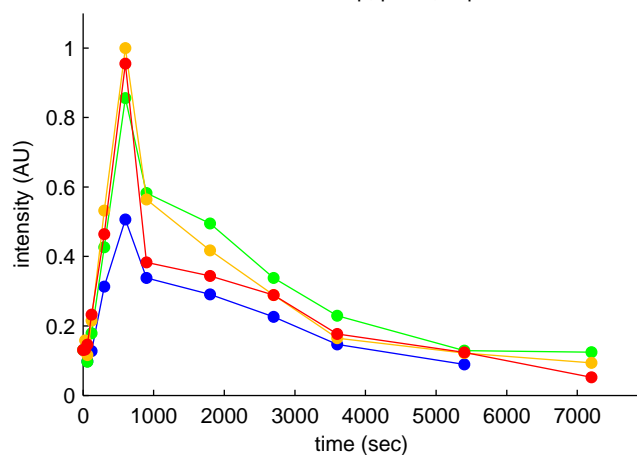
Swiss3T3_EGF_step, pAkt, experiment.



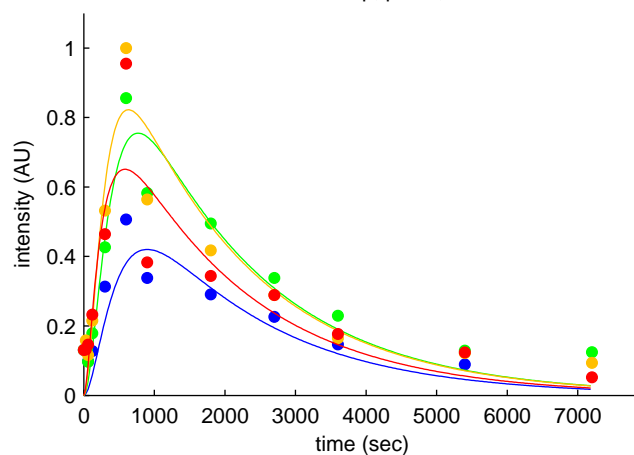
Swiss3T3_EGF_step, pAkt, simulation.



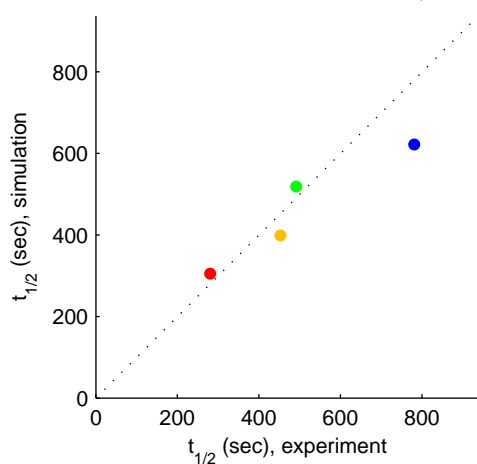
Swiss3T3_EGF_step, pS6K, experiment.



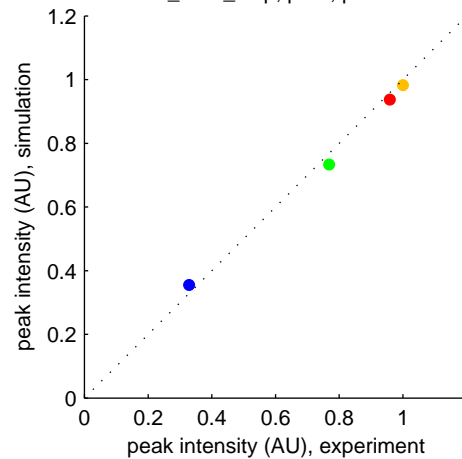
Swiss3T3_EGF_step, pS6K, simulation.



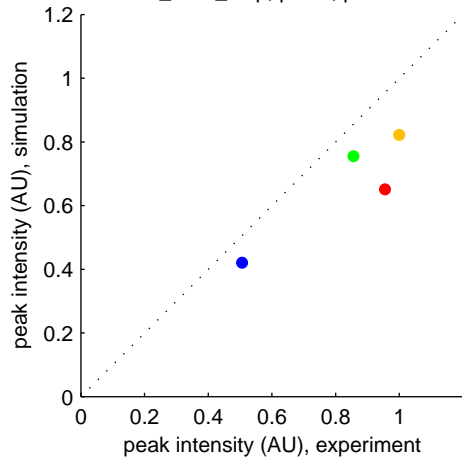
Swiss3T3_EGF_step, pAkt, $t_{1/2}$



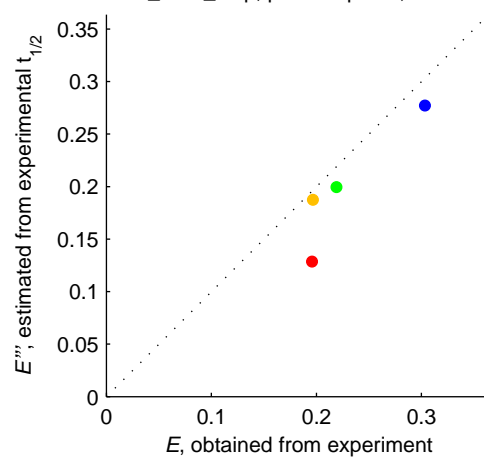
Swiss3T3_EGF_step, pAkt, peak intensity.



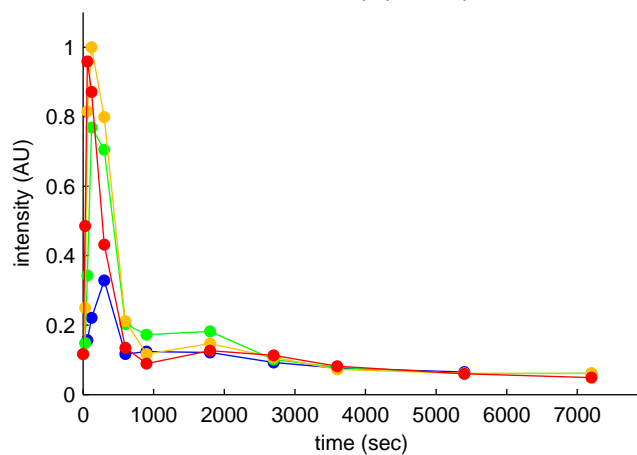
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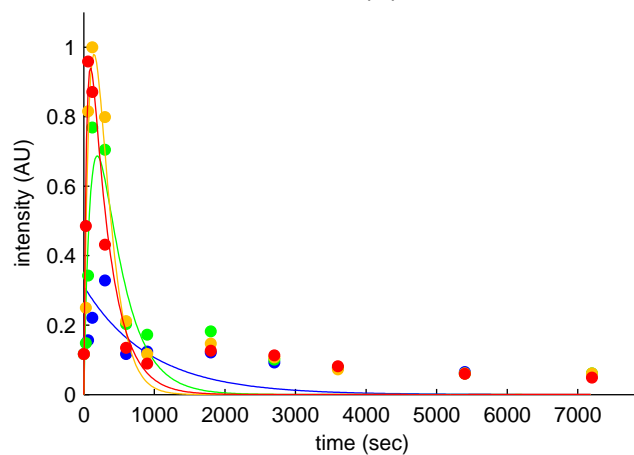
Swiss3T3_EGF_step, pAkt \rightarrow pS6K, Efficiency (E).



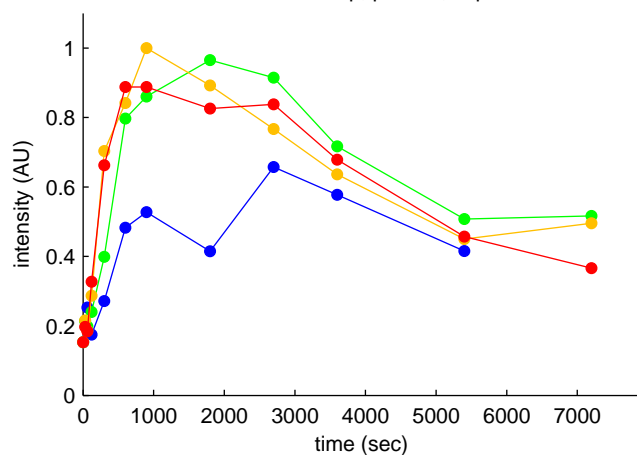
Swiss3T3_EGF_step, pAkt, experiment.



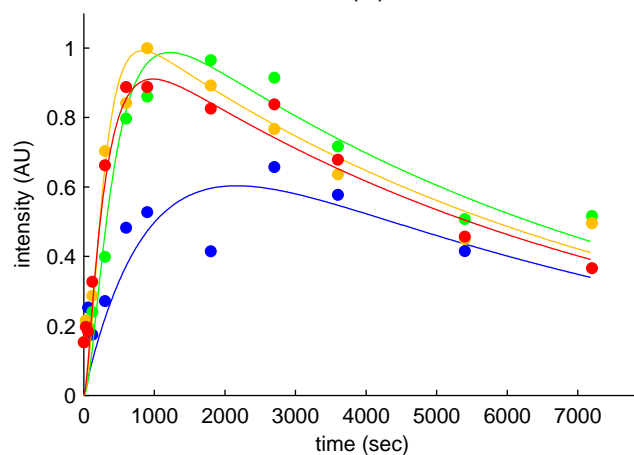
Swiss3T3_EGF_step, pAkt, simulation.



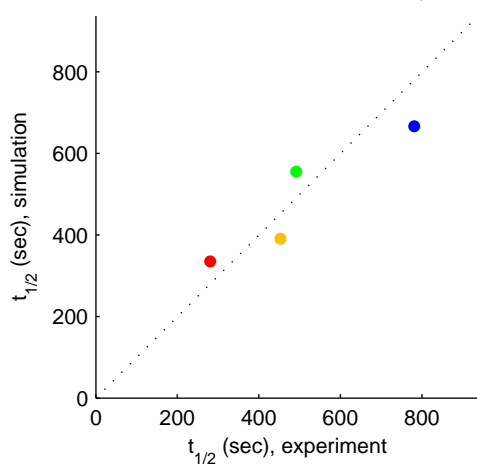
Swiss3T3_EGF_step, pElF4B, experiment.



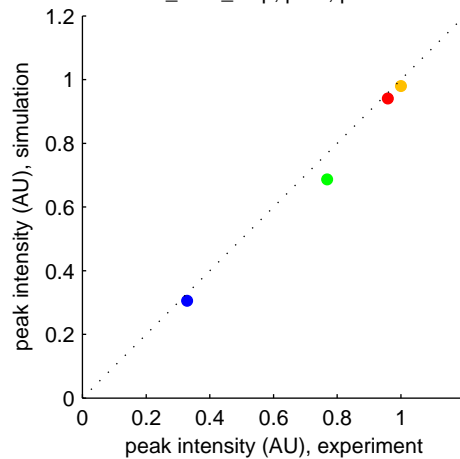
Swiss3T3_EGF_step, pElF4B, simulation.



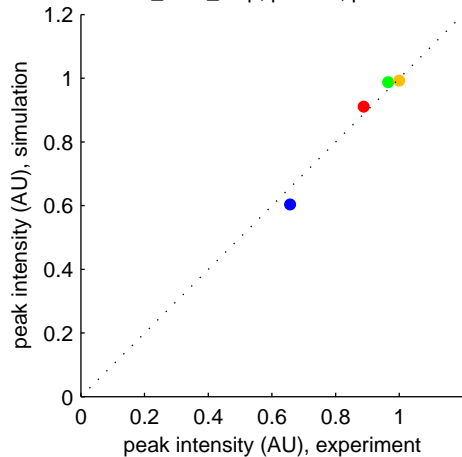
Swiss3T3_EGF_step, pAkt, $t_{1/2}$



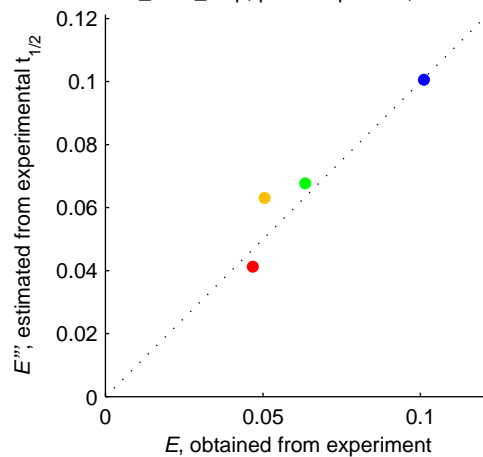
Swiss3T3_EGF_step, pAkt, peak intensity.



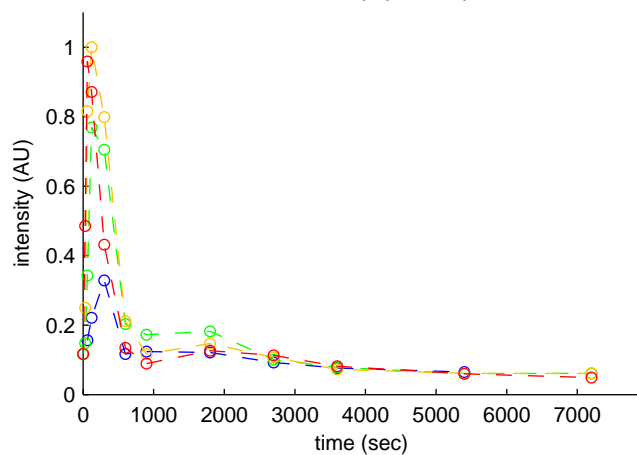
Swiss3T3_EGF_step, pElF4B, peak intensity.



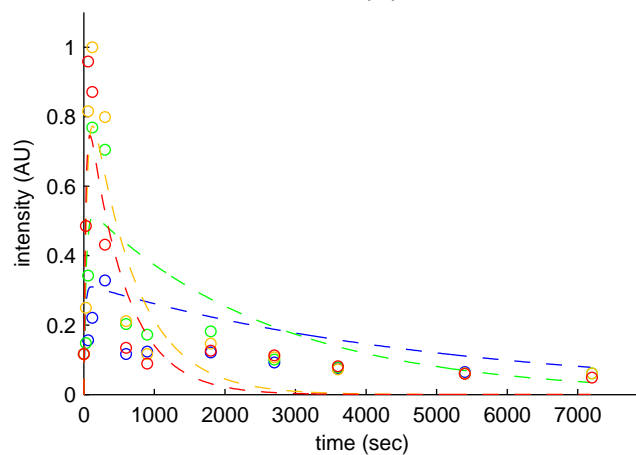
Swiss3T3_EGF_step, pAkt \rightarrow pElF4B, Efficiency (E).



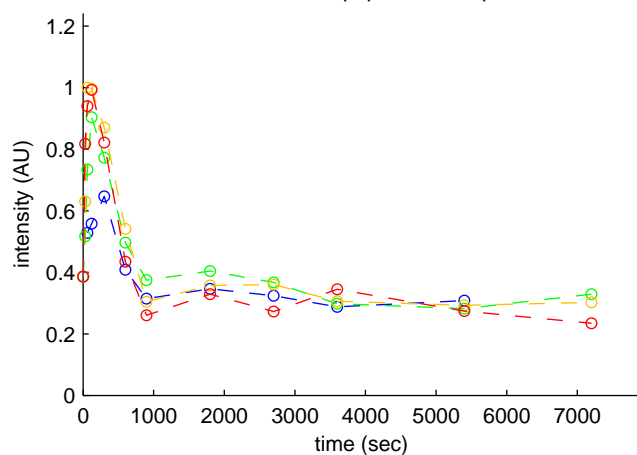
Swiss3T3_EGF_step, pAkt, experiment.



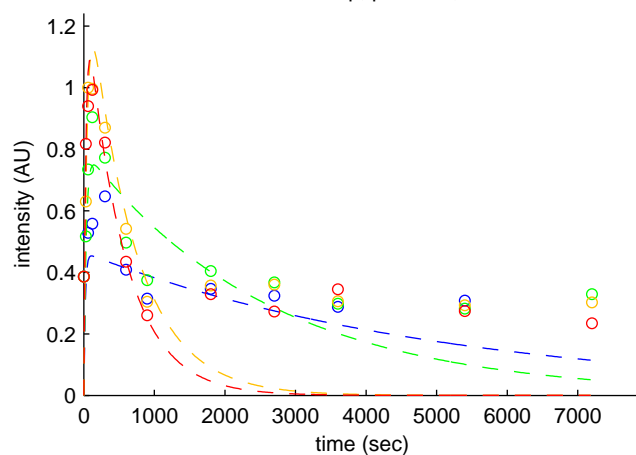
Swiss3T3_EGF_step, pAkt, simulation.



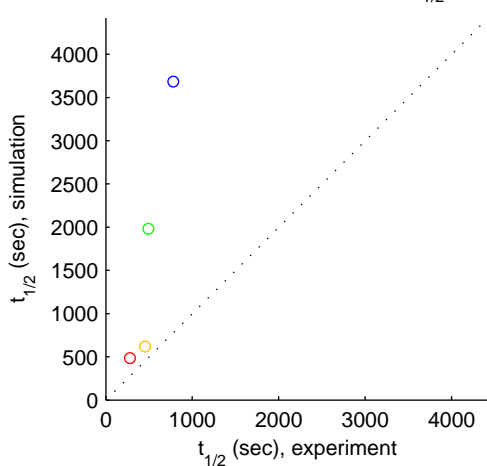
Swiss3T3_EGF_step, pGSK3b, experiment.



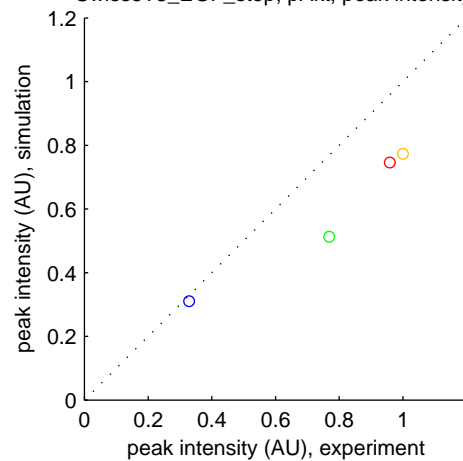
Swiss3T3_EGF_step, pGSK3b, simulation.



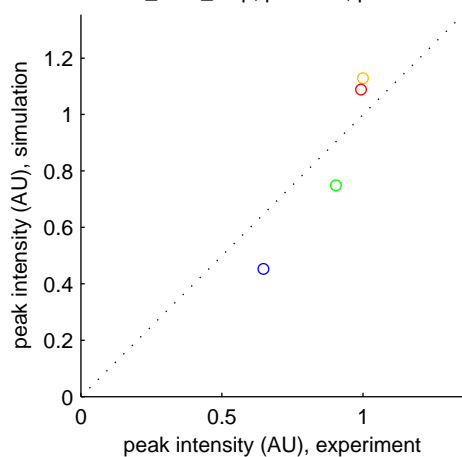
Swiss3T3_EGF_step, pAkt, $t_{1/2}$



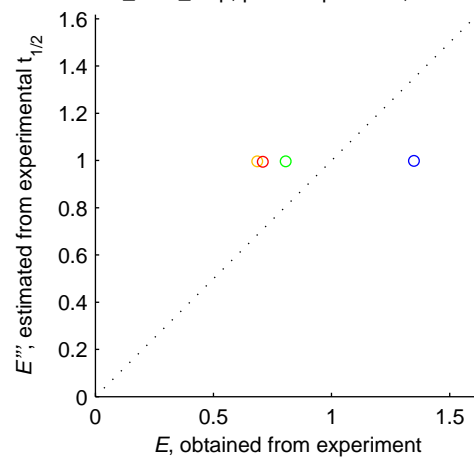
Swiss3T3_EGF_step, pAkt, peak intensity.



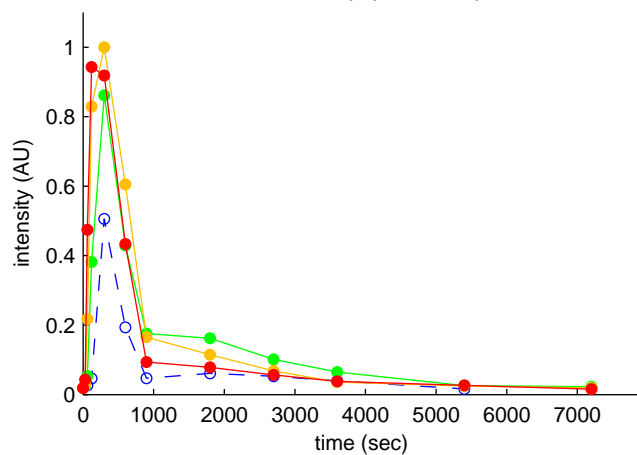
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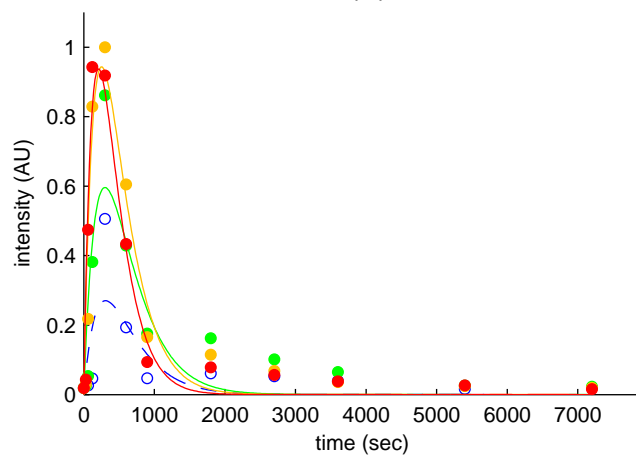
Swiss3T3_EGF_step, pAkt \rightarrow pGSK3b, Efficiency (E).



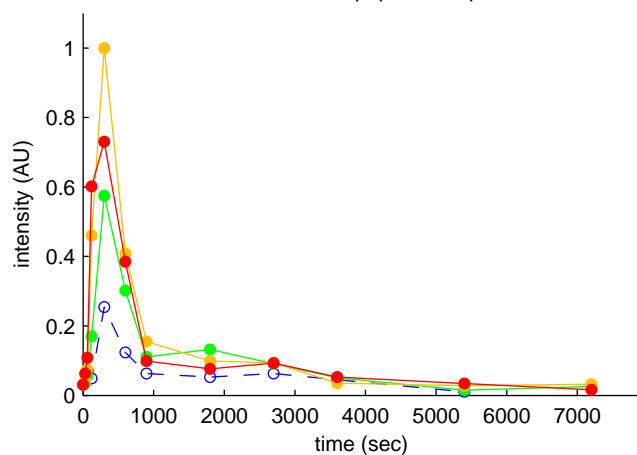
Swiss3T3_EGF_step, pERK1, experiment.



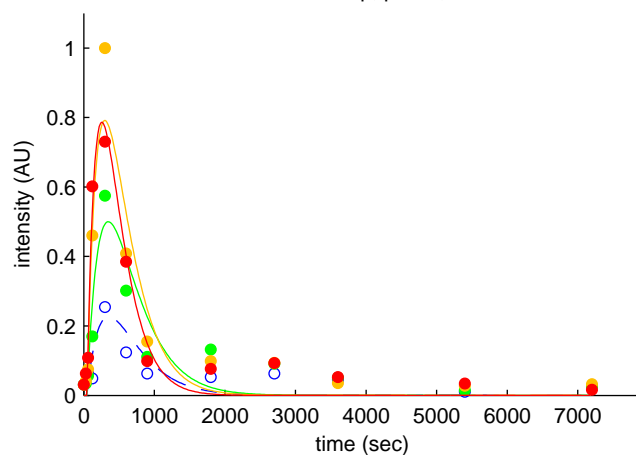
Swiss3T3_EGF_step, pERK1, simulation.



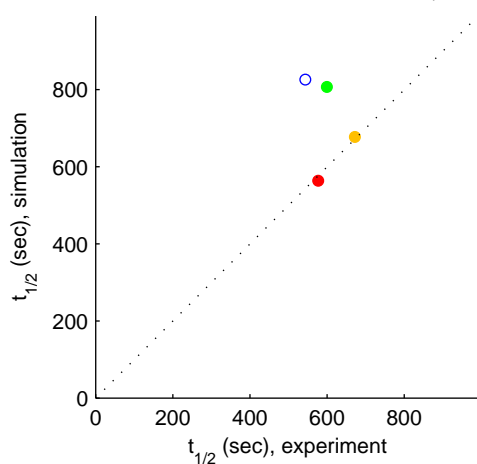
Swiss3T3_EGF_step, pRSK, experiment.



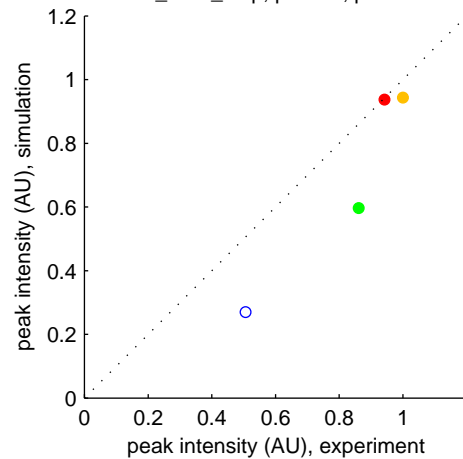
Swiss3T3_EGF_step, pRSK, simulation.



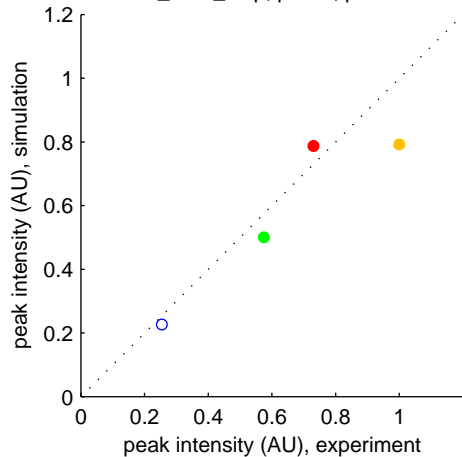
Swiss3T3_EGF_step, pERK1, $t_{1/2}$



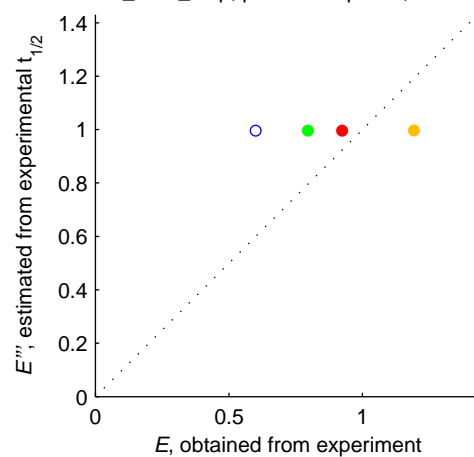
Swiss3T3_EGF_step, pERK1, peak intensity.



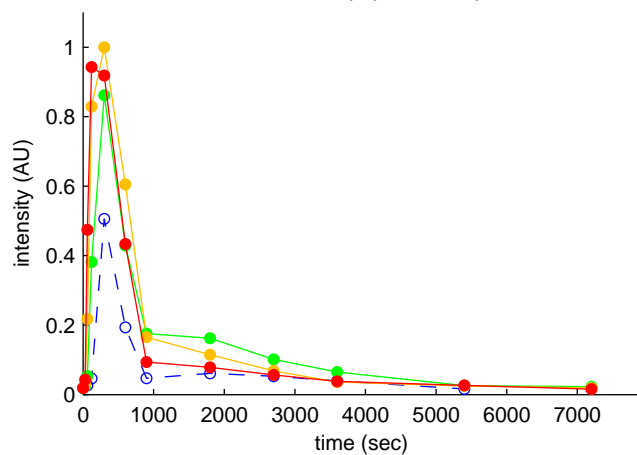
Swiss3T3_EGF_step, pRSK, peak intensity.



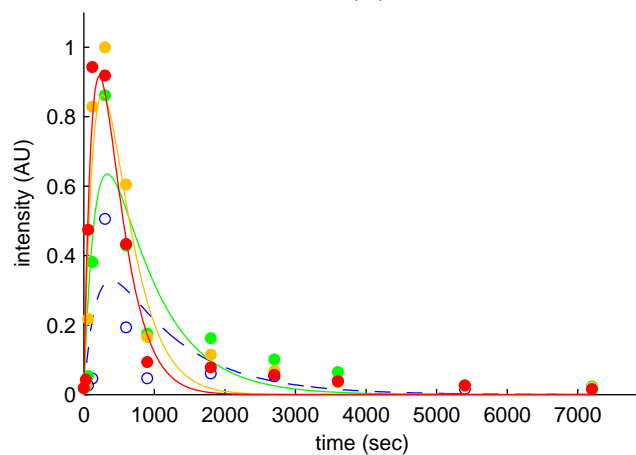
Swiss3T3_EGF_step, pERK1 \rightarrow pRSK, Efficiency (E).



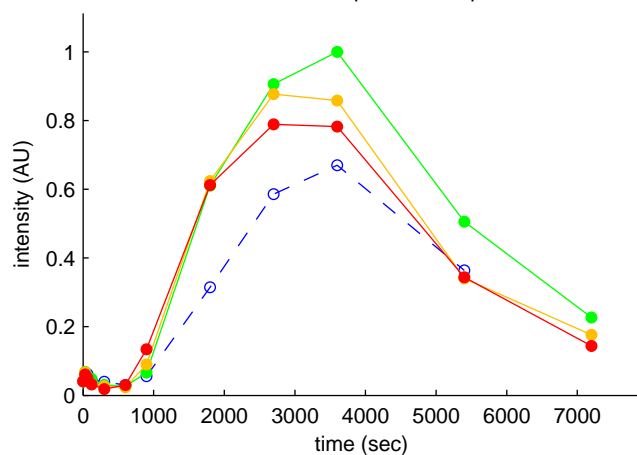
Swiss3T3_EGF_step, pERK1, experiment.



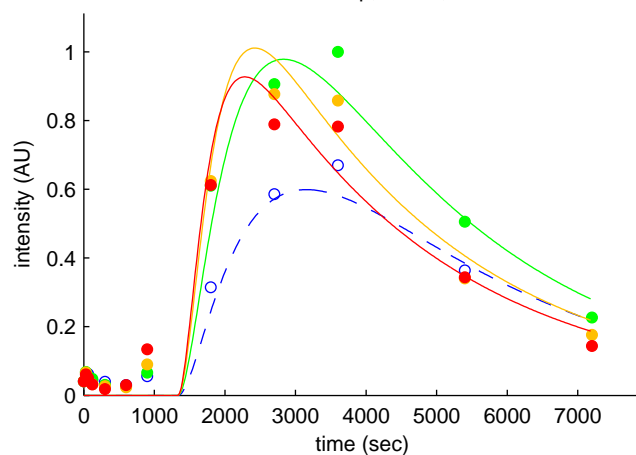
Swiss3T3_EGF_step, pERK1, simulation.



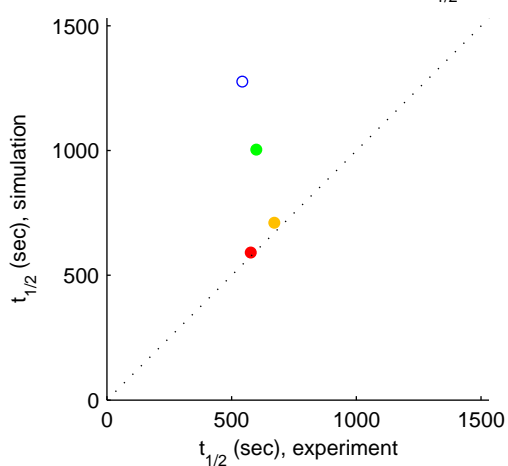
Swiss3T3_EGF_step, EGR1, experiment.



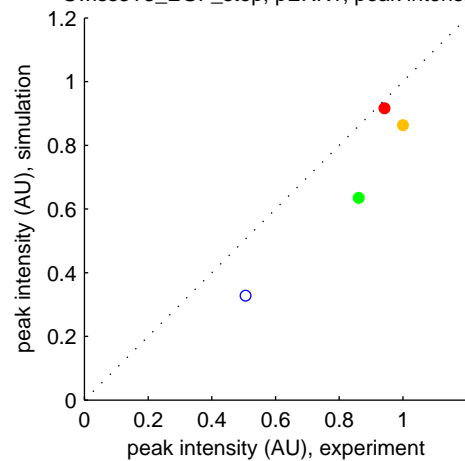
Swiss3T3_EGF_step, EGR1, simulation.



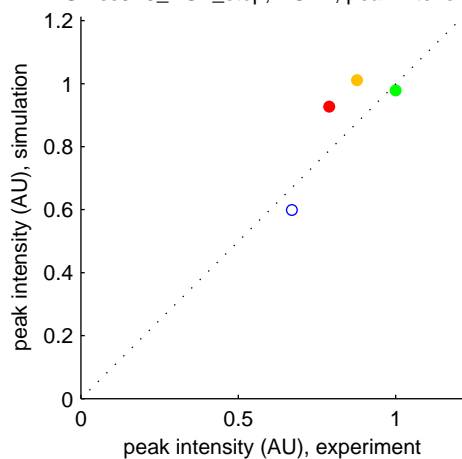
Swiss3T3_EGF_step, pERK1, $t_{1/2}$



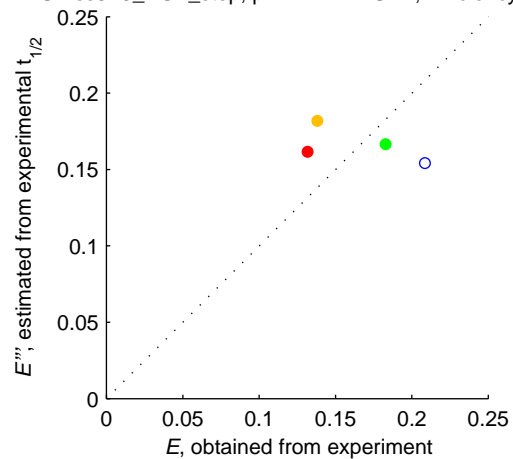
Swiss3T3_EGF_step, pERK1, peak intensity.



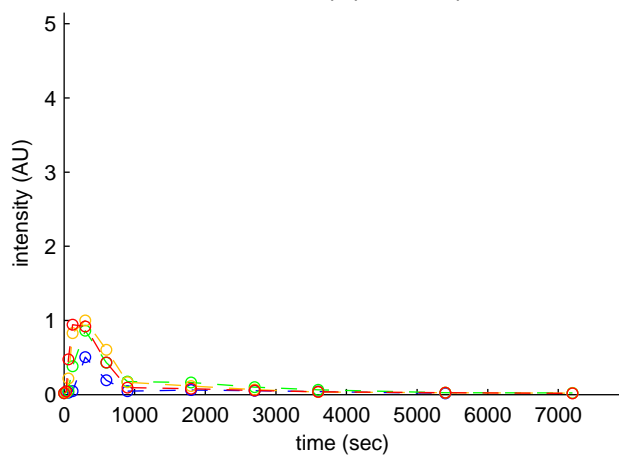
Swiss3T3_EGF_step, EGR1, peak intensity.



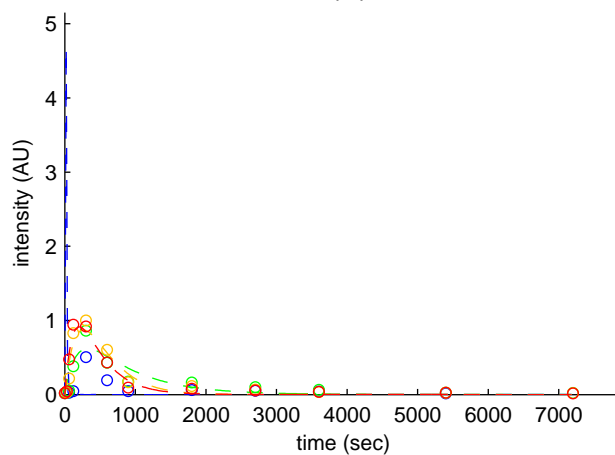
Swiss3T3_EGF_step, pERK1 \rightarrow EGR1, Efficiency (E).



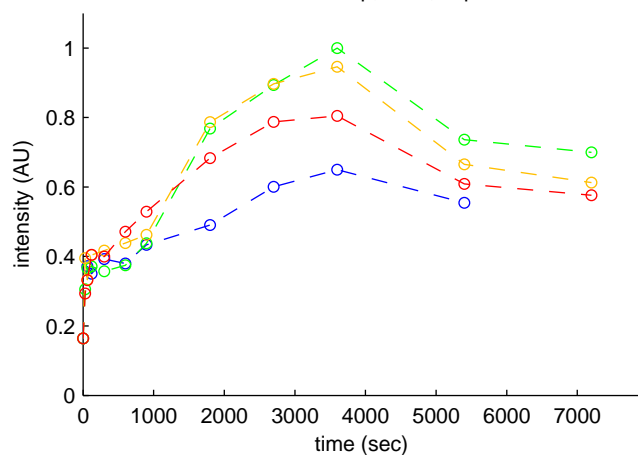
Swiss3T3_EGF_step, pERK1, experiment.



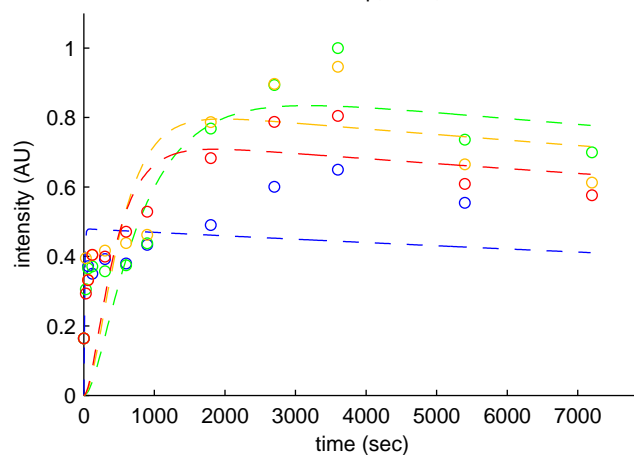
Swiss3T3_EGF_step, pERK1, simulation.



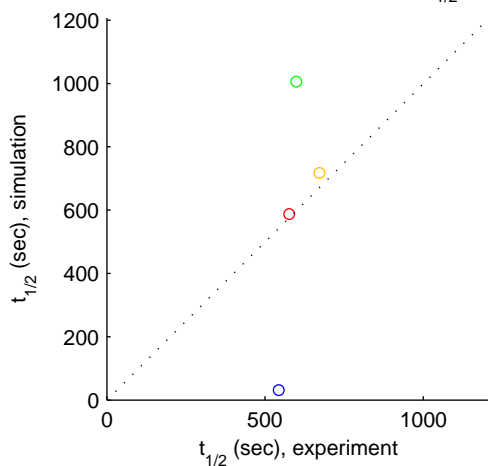
Swiss3T3_EGF_step, cJun, experiment.



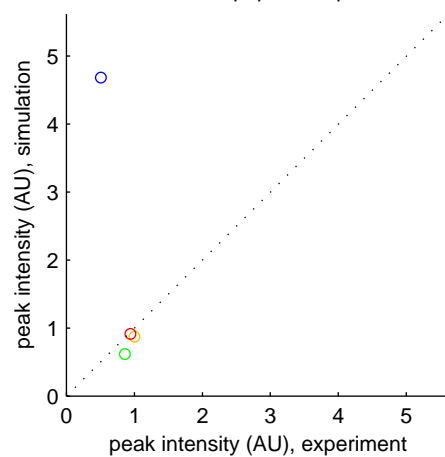
Swiss3T3_EGF_step, cJun, simulation.



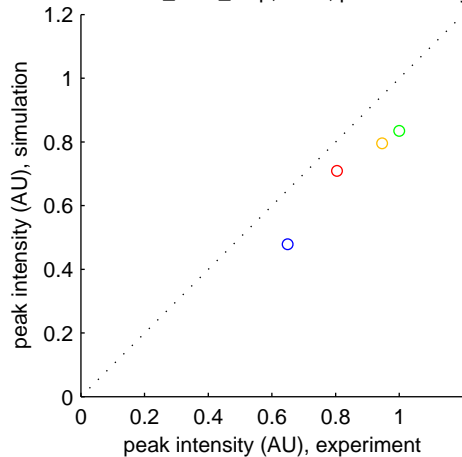
Swiss3T3_EGF_step, pERK1, $t_{1/2}$



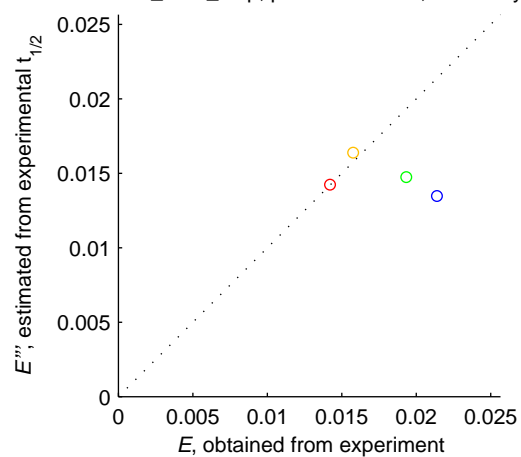
Swiss3T3_EGF_step, pERK1, peak intensity.



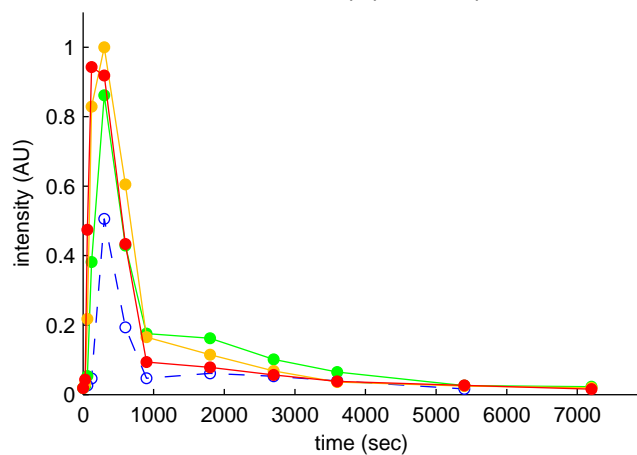
Swiss3T3_EGF_step, cJun, peak intensity.



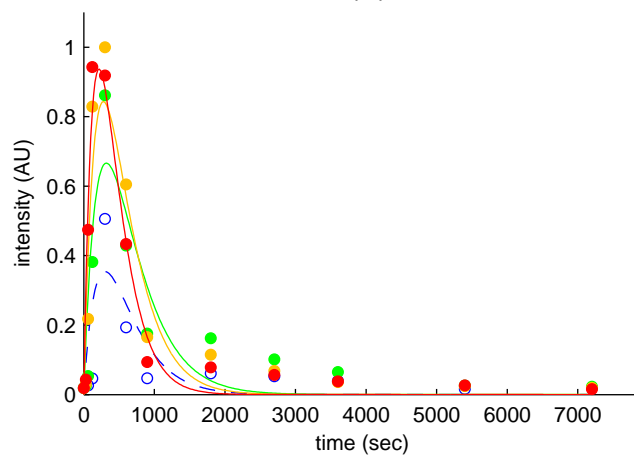
Swiss3T3_EGF_step, pERK1 \rightarrow cJun, Efficiency (E).



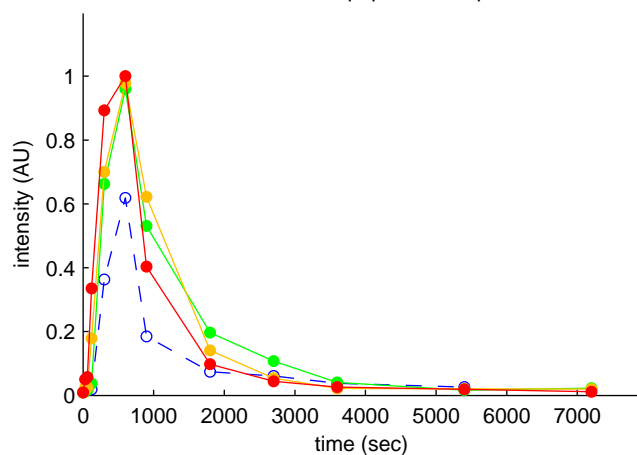
Swiss3T3_EGF_step, pERK1, experiment.



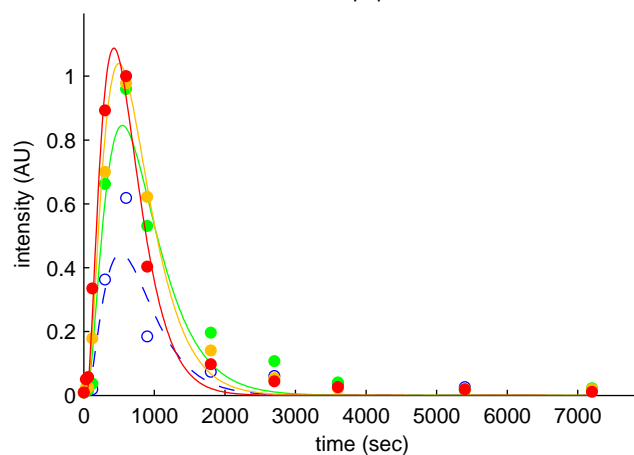
Swiss3T3_EGF_step, pERK1, simulation.



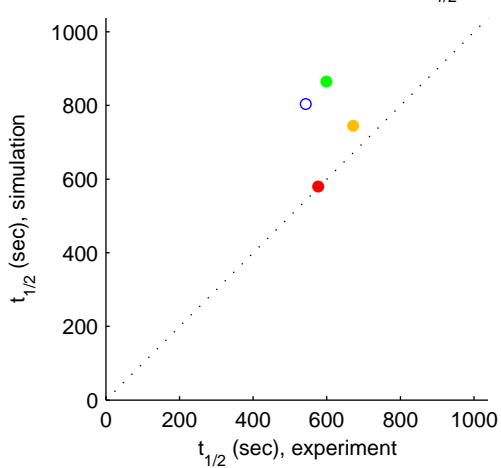
Swiss3T3_EGF_step, pCREB, experiment.



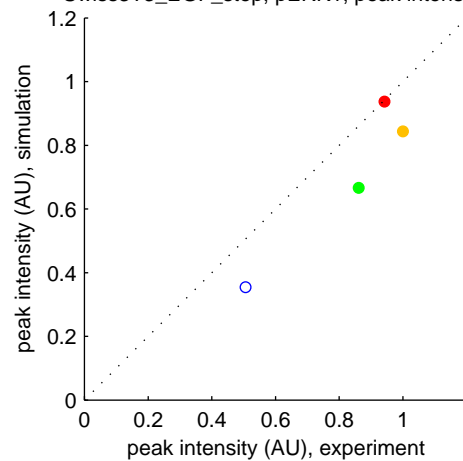
Swiss3T3_EGF_step, pCREB, simulation.



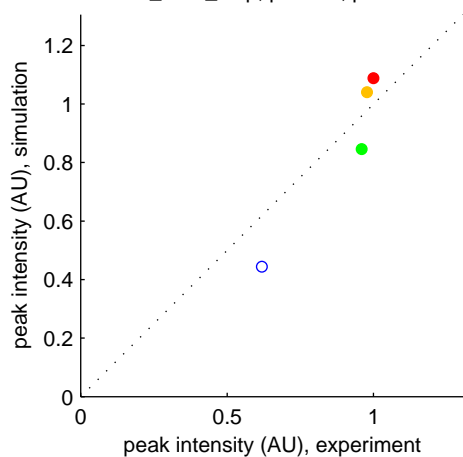
Swiss3T3_EGF_step, pERK1, $t_{1/2}$



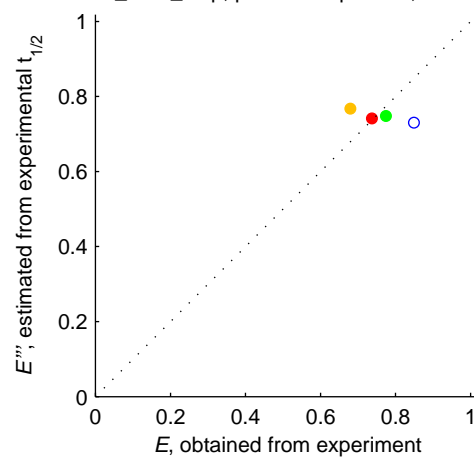
Swiss3T3_EGF_step, pERK1, peak intensity.



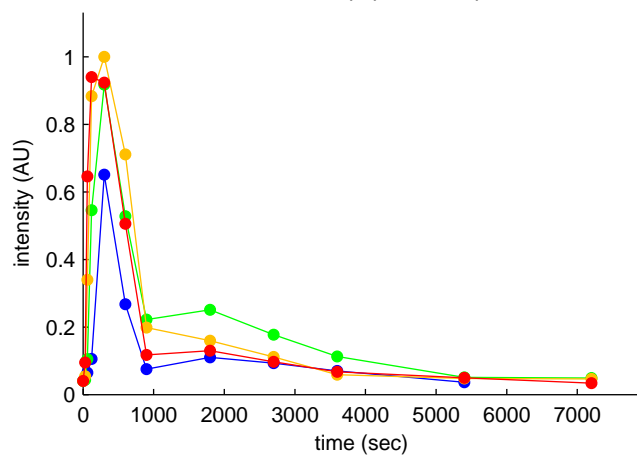
Swiss3T3_EGF_step, pCREB, peak intensity.



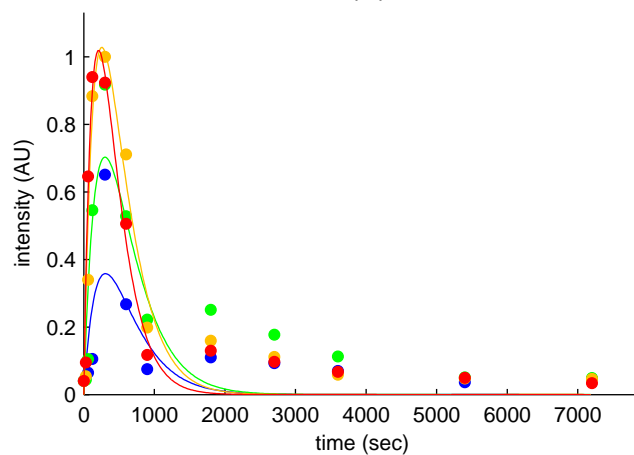
Swiss3T3_EGF_step, pERK1 \rightarrow pCREB, Efficiency (E).



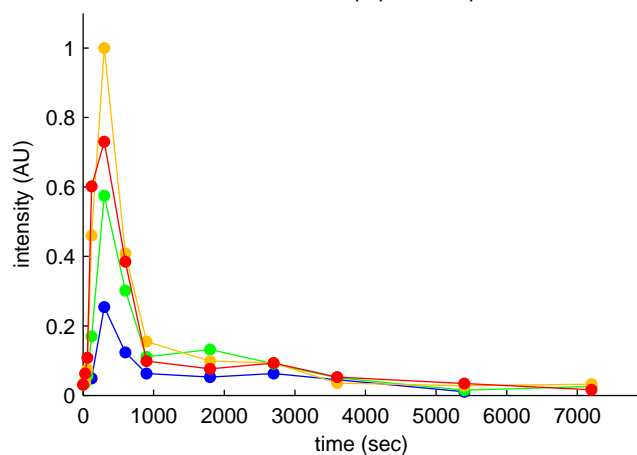
Swiss3T3_EGF_step, pERK2, experiment.



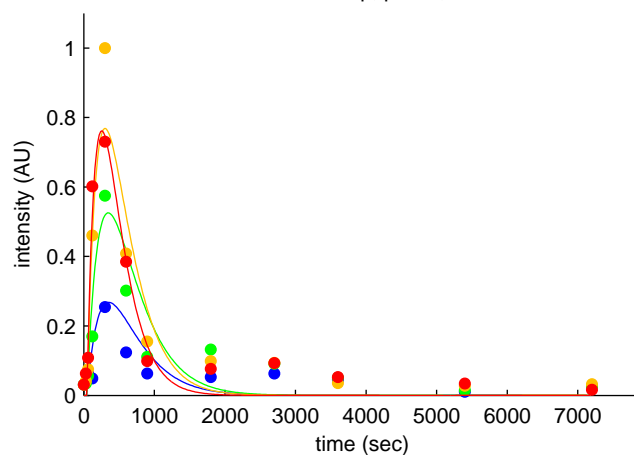
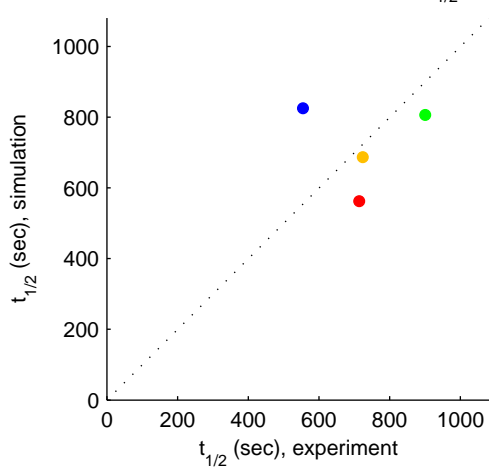
Swiss3T3_EGF_step, pERK2, simulation.



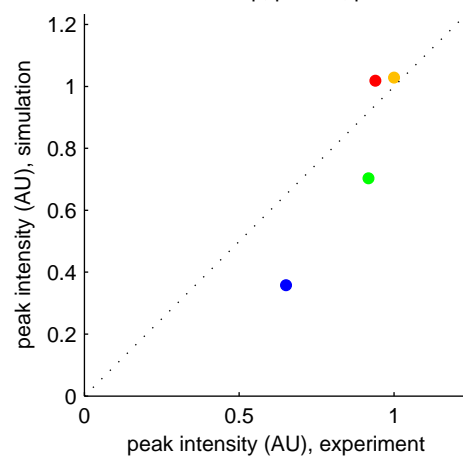
Swiss3T3_EGF_step, pRSK, experiment.



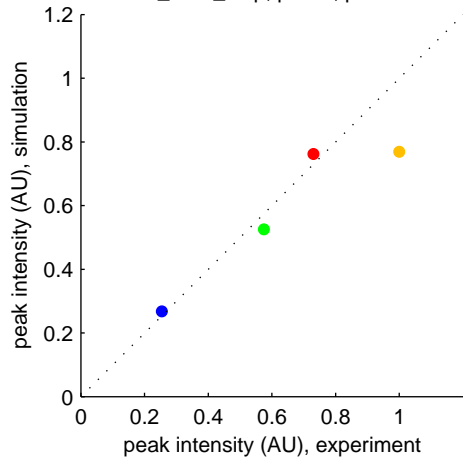
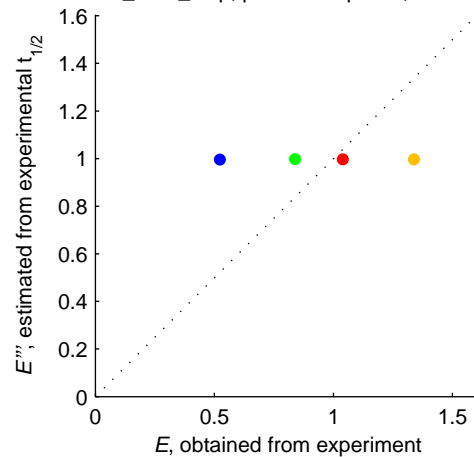
Swiss3T3_EGF_step, pRSK, simulation.

Swiss3T3_EGF_step, pERK2, $t_{1/2}$ 

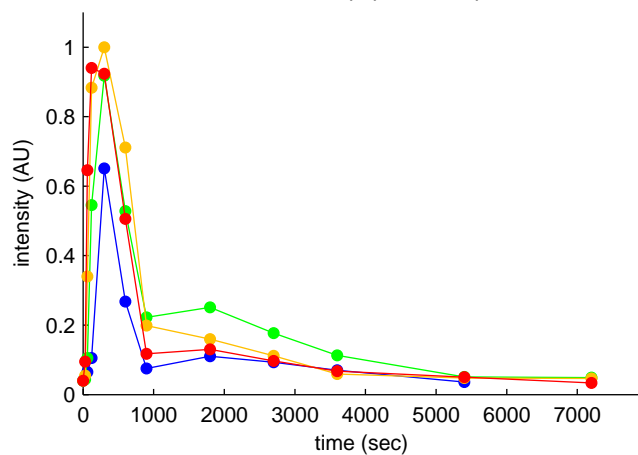
Swiss3T3_EGF_step, pERK2, peak intensity.



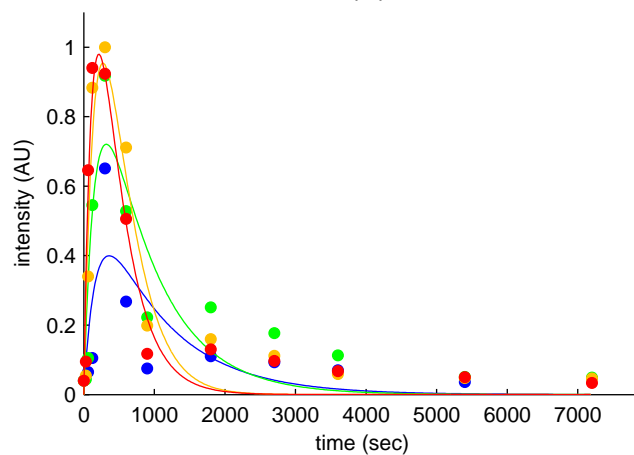
Swiss3T3_EGF_step, pRSK, peak intensity.

Swiss3T3_EGF_step, pERK2 \rightarrow pRSK, Efficiency (E).

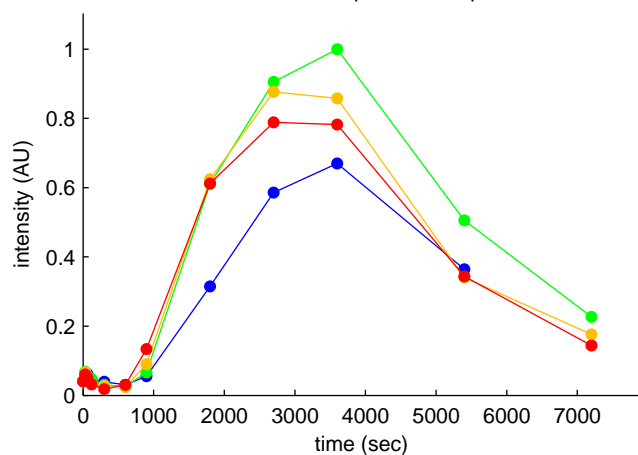
Swiss3T3_EGF_step, pERK2, experiment.



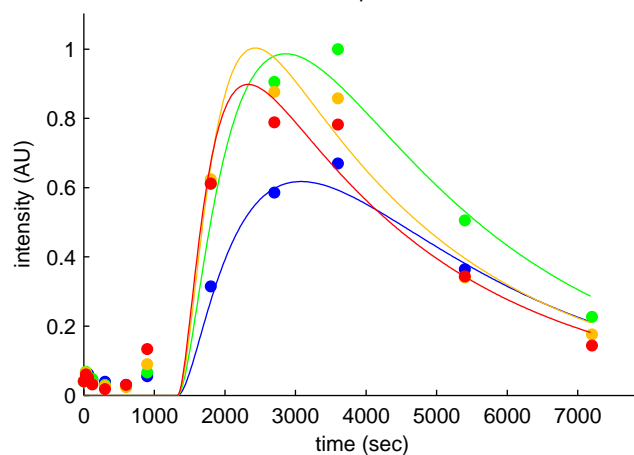
Swiss3T3_EGF_step, pERK2, simulation.



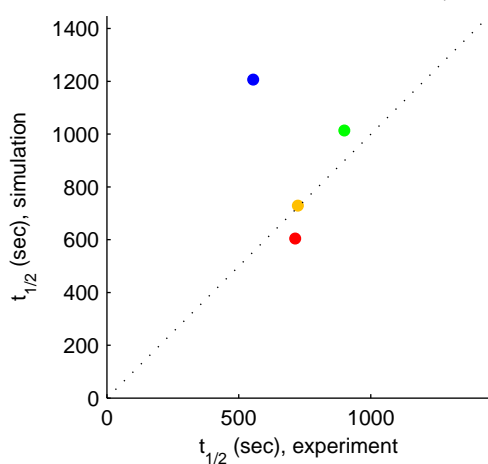
Swiss3T3_EGF_step, EGR1, experiment.



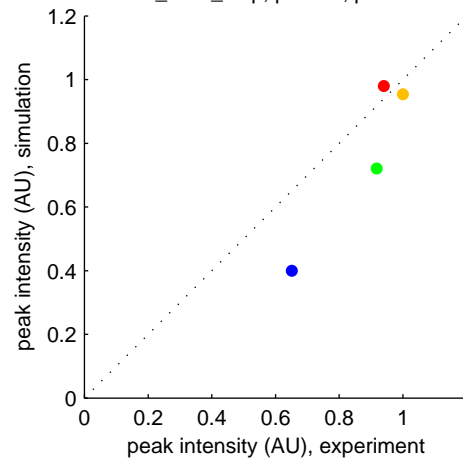
Swiss3T3_EGF_step, EGR1, simulation.



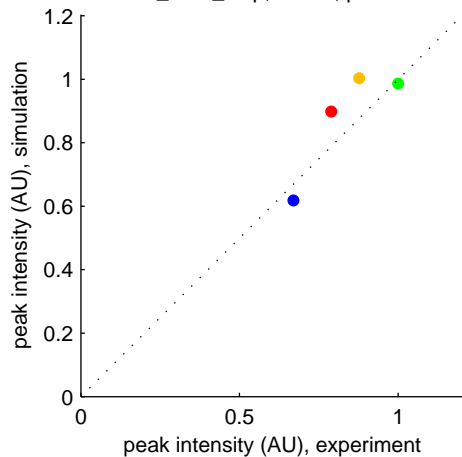
Swiss3T3_EGF_step, pERK2, $t_{1/2}$



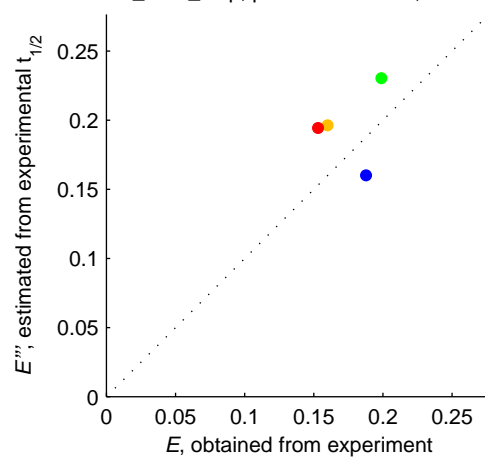
Swiss3T3_EGF_step, pERK2, peak intensity.



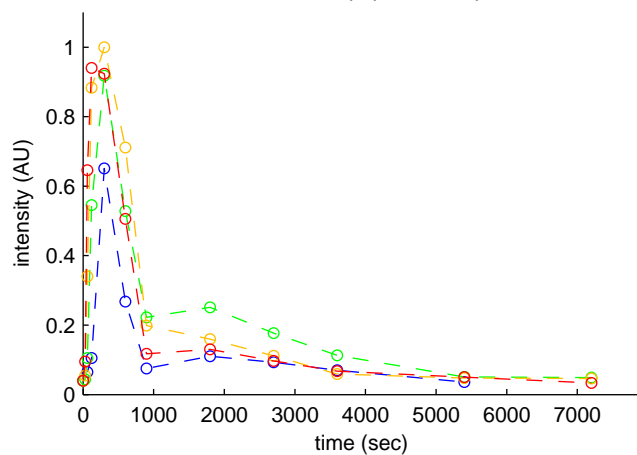
Swiss3T3_EGF_step, EGR1, peak intensity.



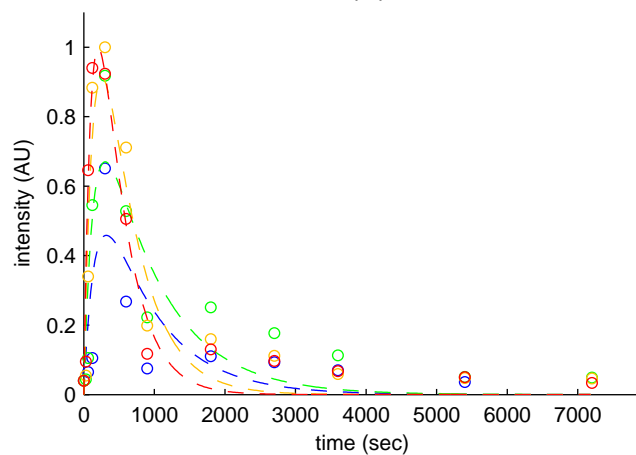
Swiss3T3_EGF_step, pERK2 \rightarrow EGR1, Efficiency (E).



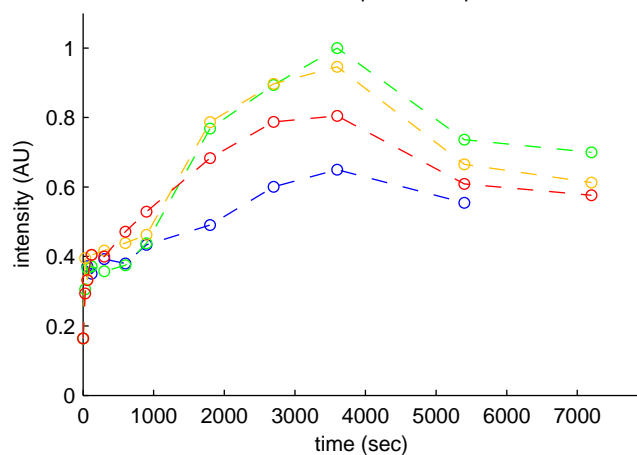
Swiss3T3_EGF_step, pERK2, experiment.



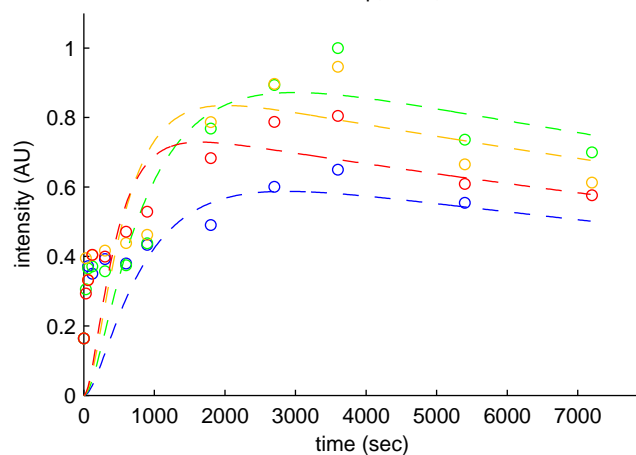
Swiss3T3_EGF_step, pERK2, simulation.



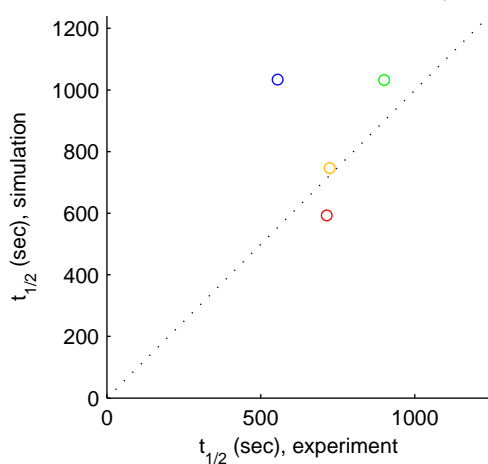
Swiss3T3_EGF_step, cJun, experiment.



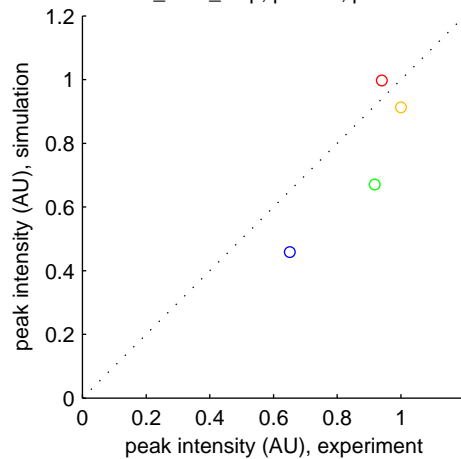
Swiss3T3_EGF_step, cJun, simulation.



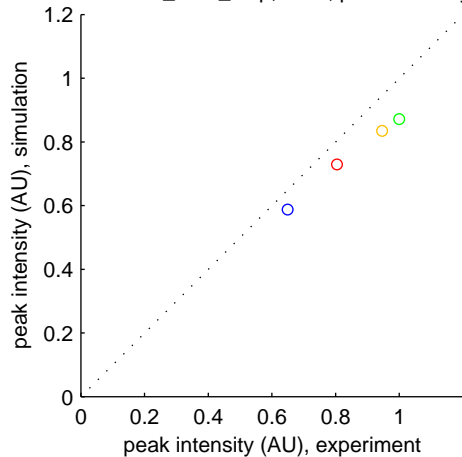
Swiss3T3_EGF_step, pERK2, $t_{1/2}$



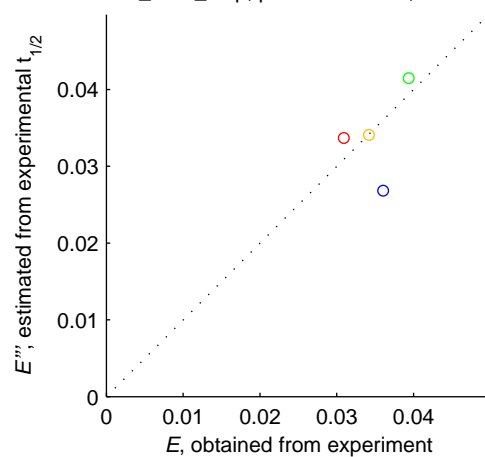
Swiss3T3_EGF_step, pERK2, peak intensity.



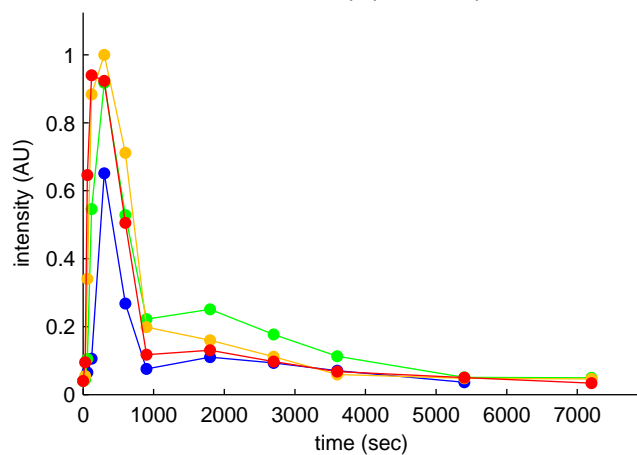
Swiss3T3_EGF_step, cJun, peak intensity.



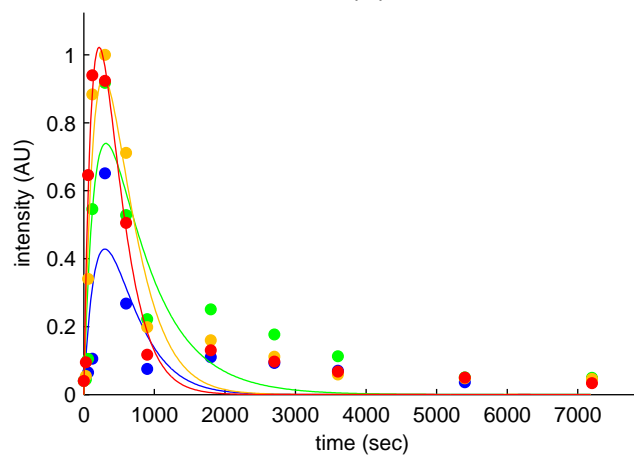
Swiss3T3_EGF_step, pERK2 \rightarrow cJun, Efficiency (E).



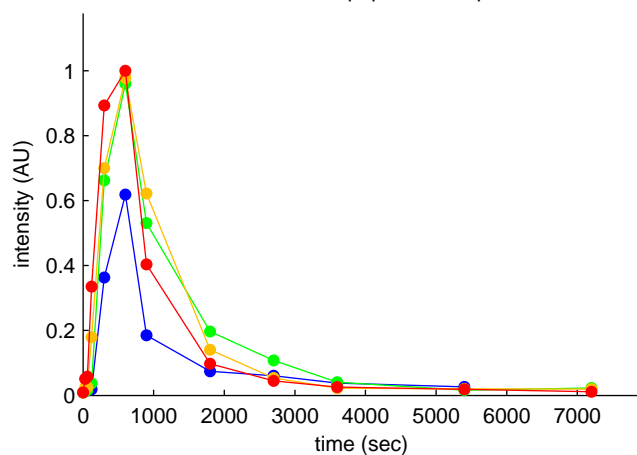
Swiss3T3_EGF_step, pERK2, experiment.



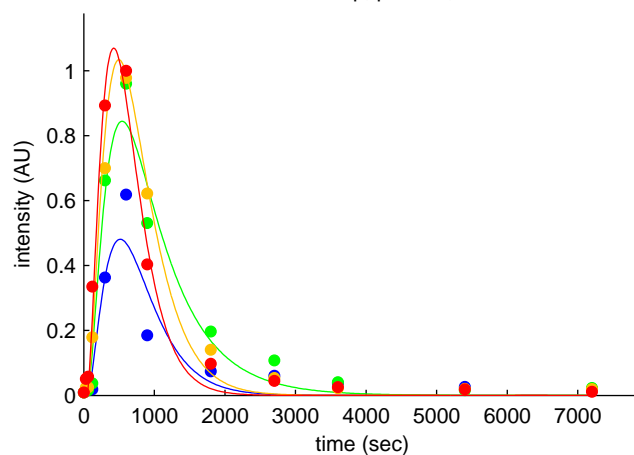
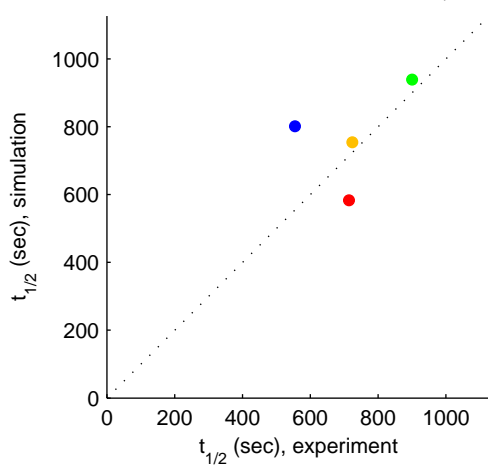
Swiss3T3_EGF_step, pERK2, simulation.



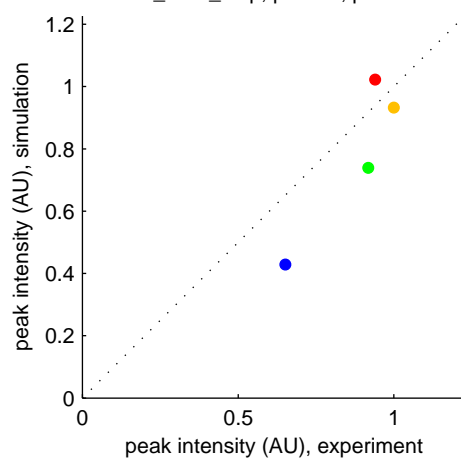
Swiss3T3_EGF_step, pCREB, experiment.



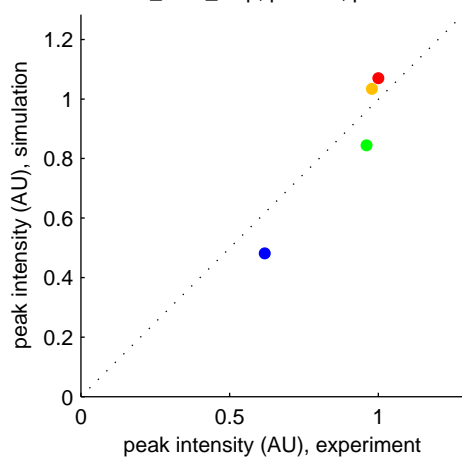
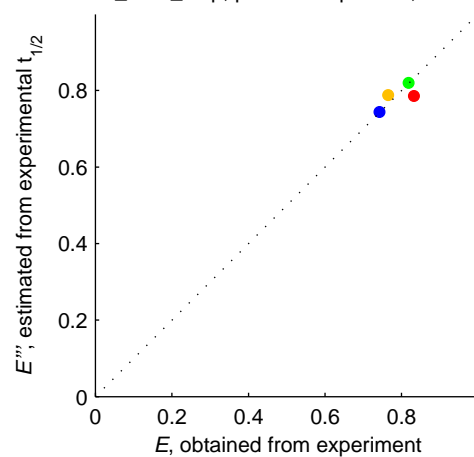
Swiss3T3_EGF_step, pCREB, simulation.

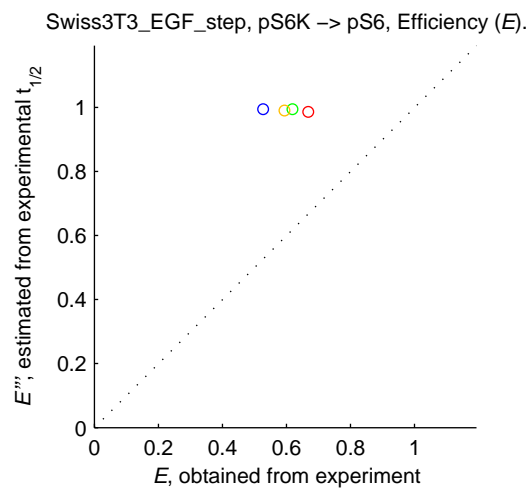
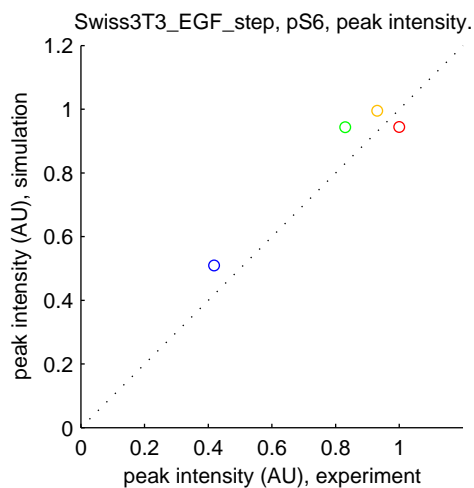
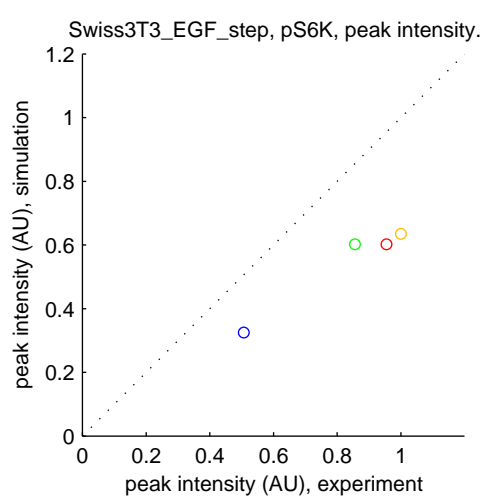
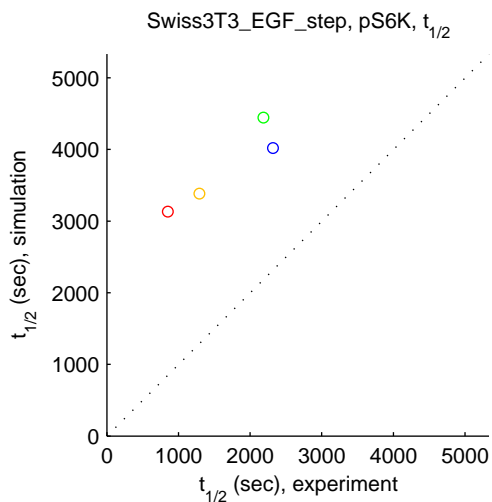
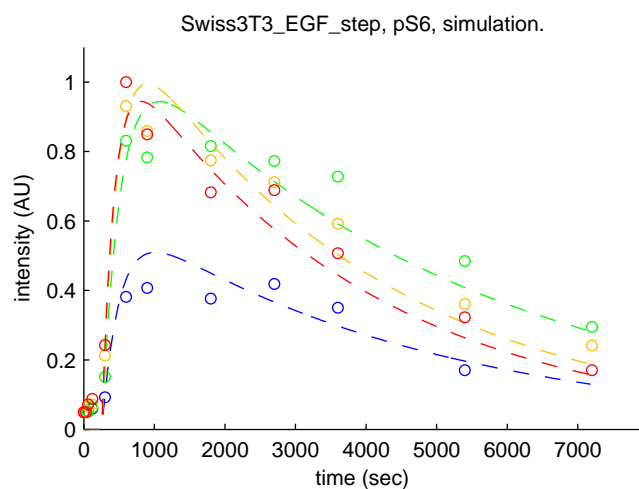
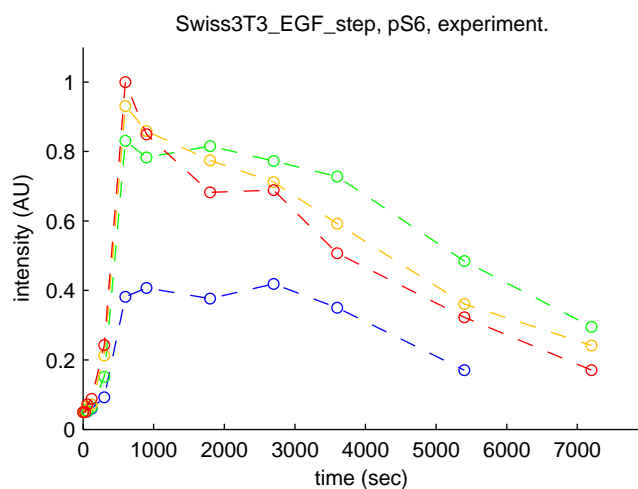
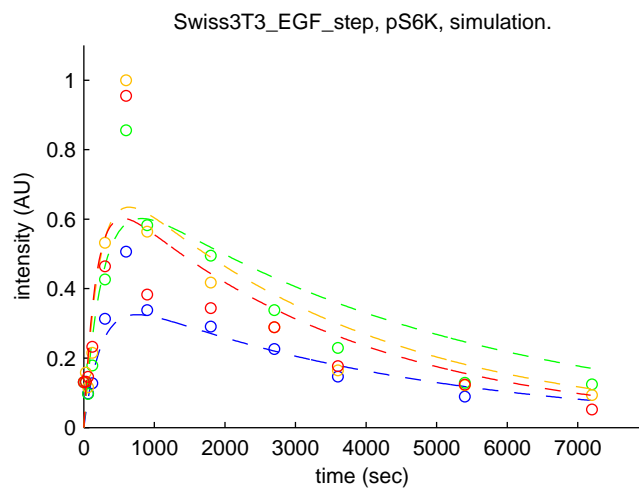
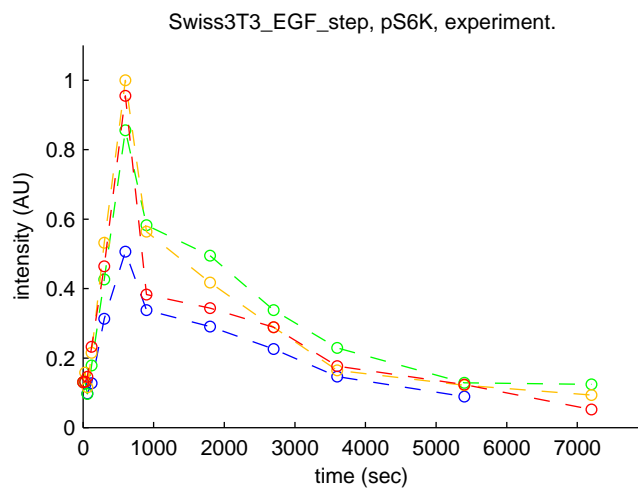
Swiss3T3_EGF_step, pERK2, $t_{1/2}$ 

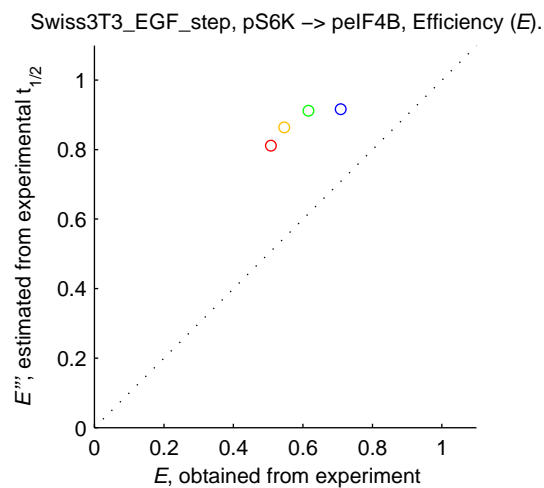
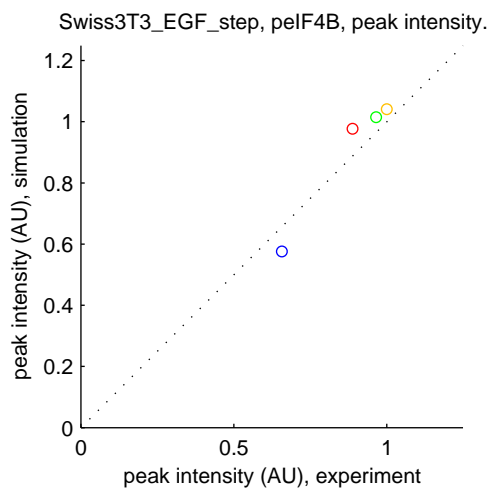
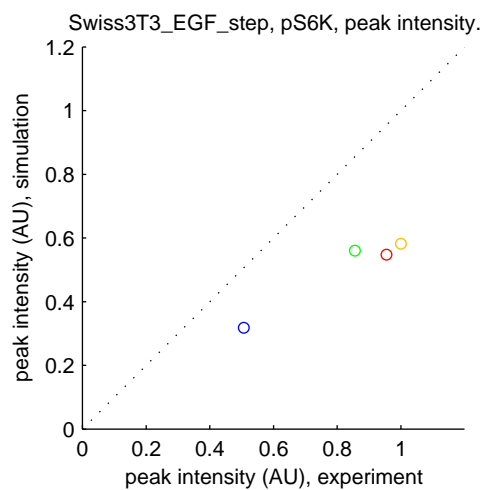
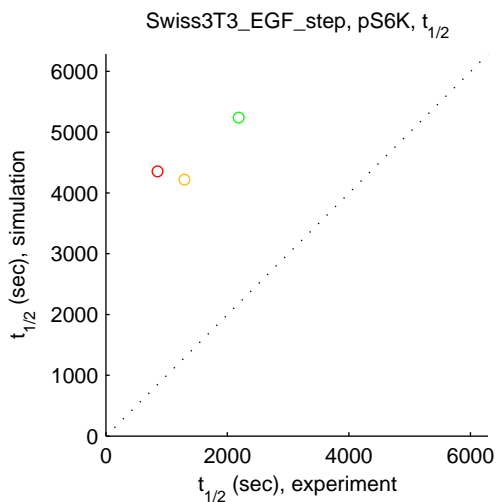
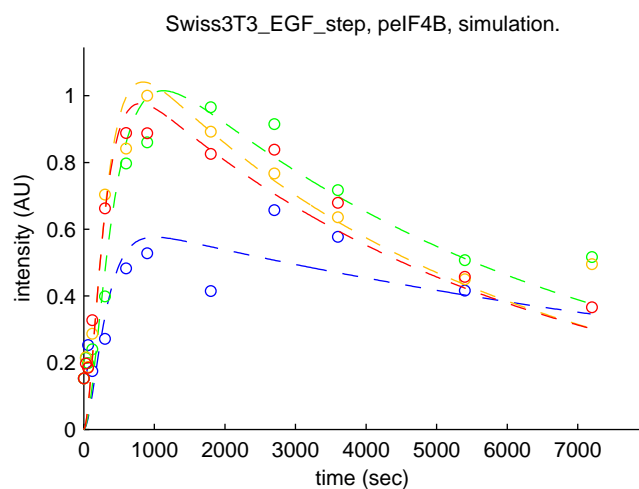
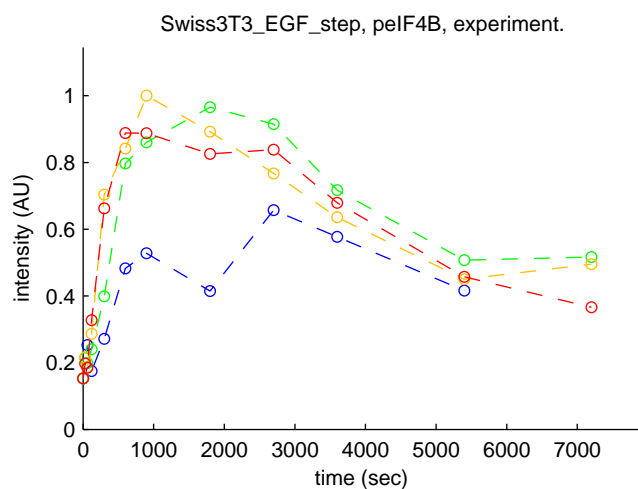
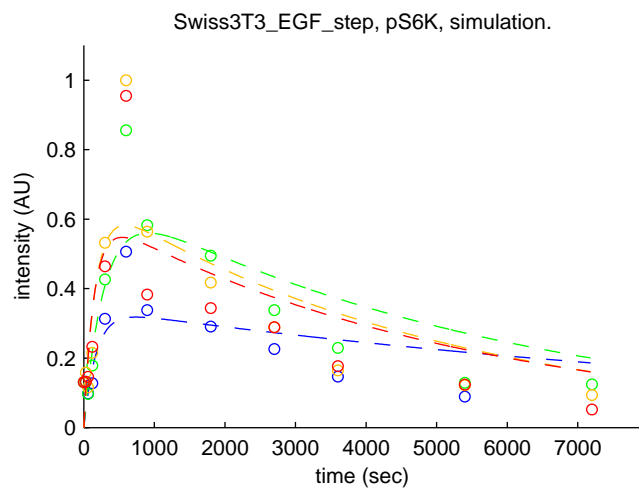
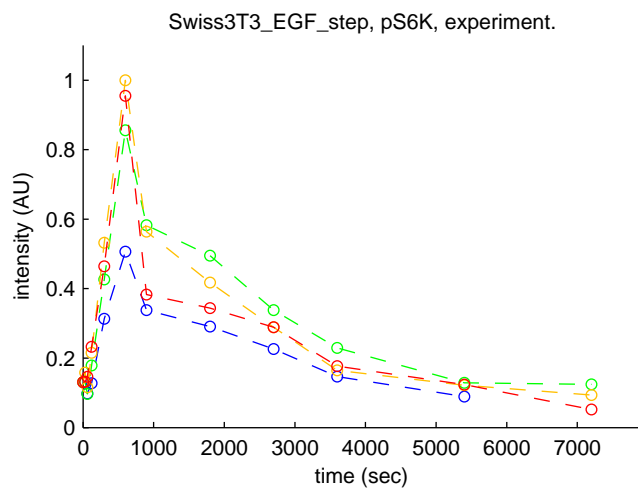
Swiss3T3_EGF_step, pERK2, peak intensity.



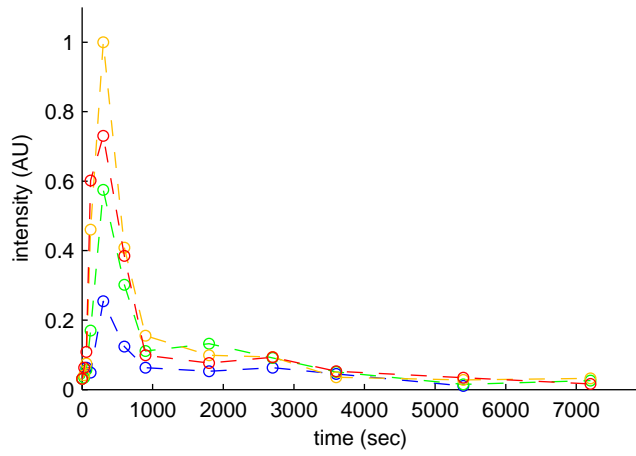
Swiss3T3_EGF_step, pCREB, peak intensity.

Swiss3T3_EGF_step, pERK2 \rightarrow pCREB, Efficiency (E).

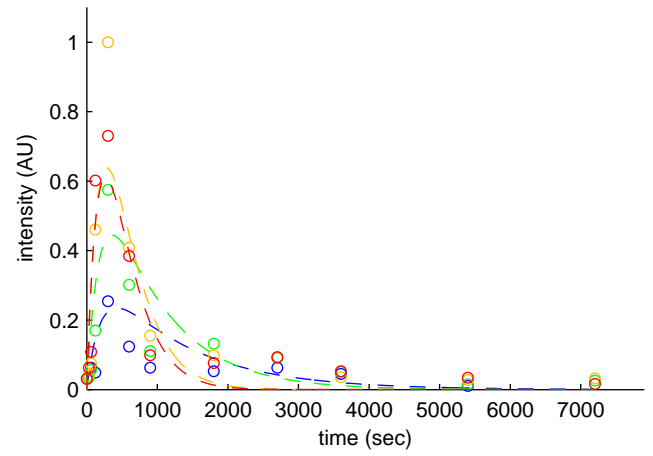




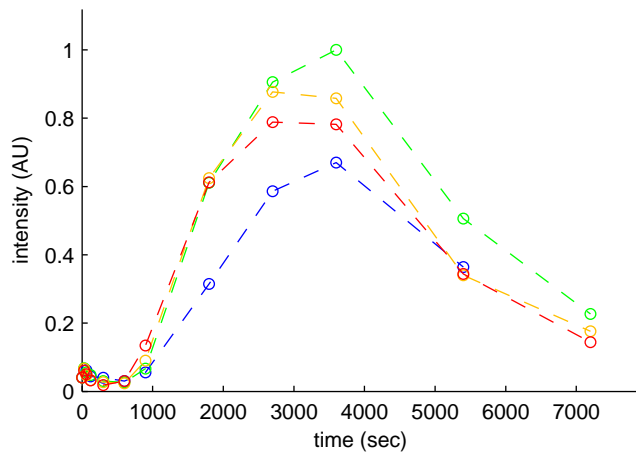
Swiss3T3_EGF_step, pRSK, experiment.



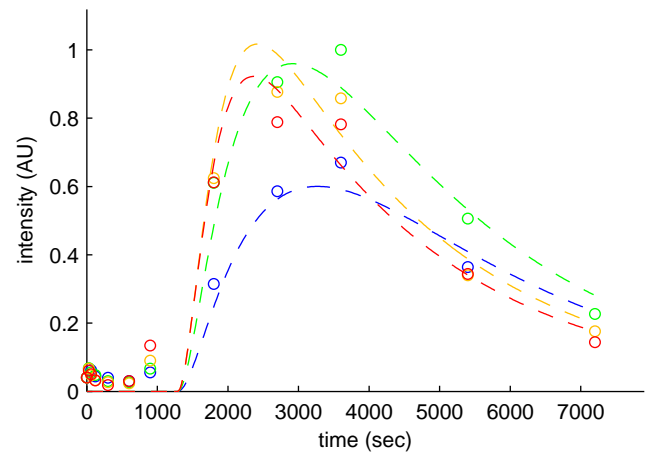
Swiss3T3_EGF_step, pRSK, simulation.



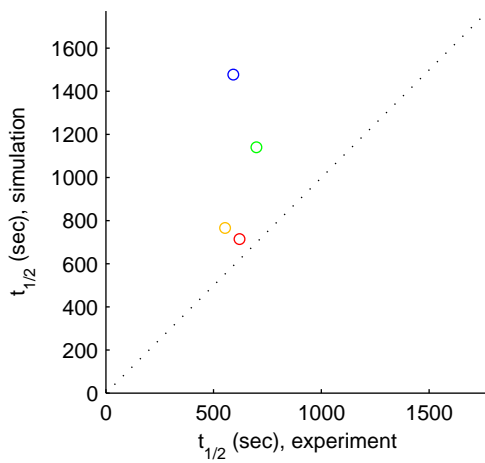
Swiss3T3_EGF_step, EGR1, experiment.



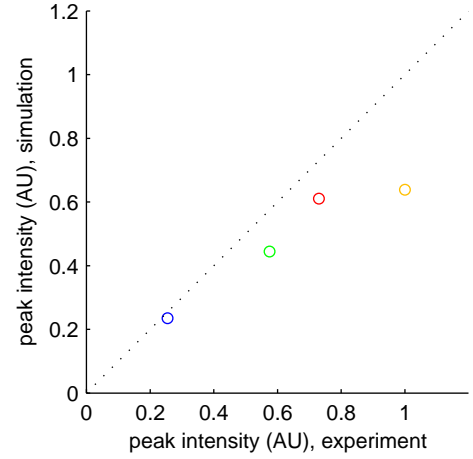
Swiss3T3_EGF_step, EGR1, simulation.



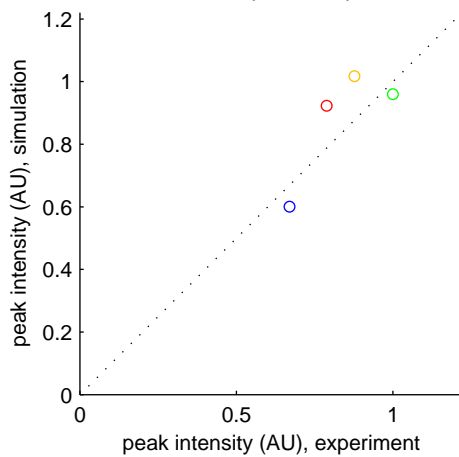
Swiss3T3_EGF_step, pRSK, $t_{1/2}$



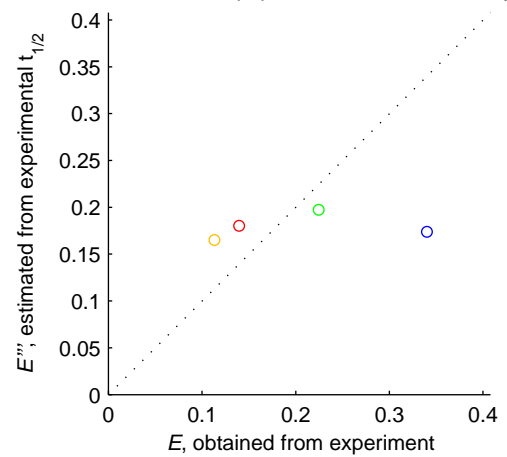
Swiss3T3_EGF_step, pRSK, peak intensity.



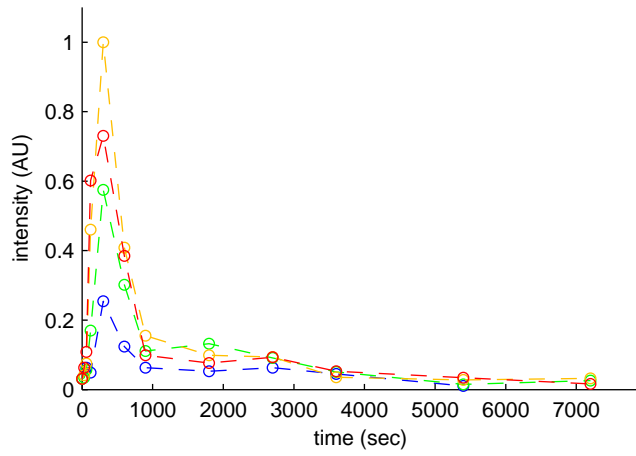
Swiss3T3_EGF_step, EGR1, peak intensity.



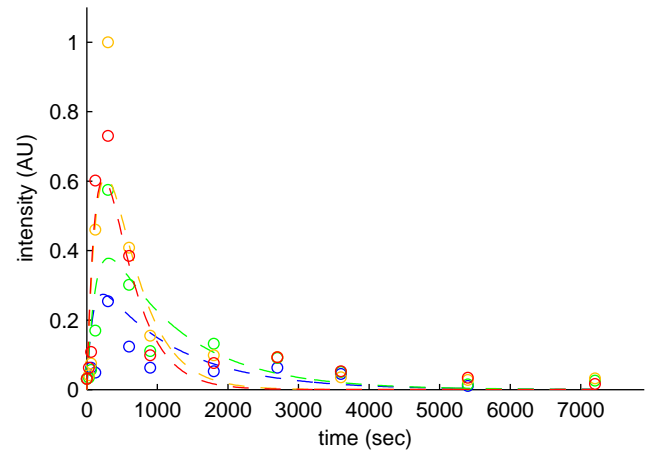
Swiss3T3_EGF_step, pRSK \rightarrow EGR1, Efficiency (E).



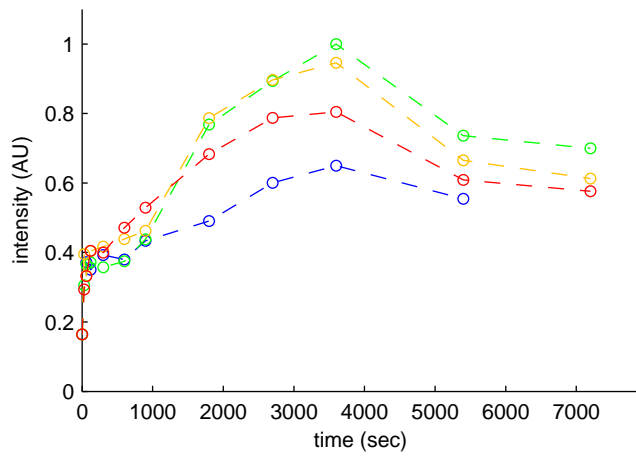
Swiss3T3_EGF_step, pRSK, experiment.



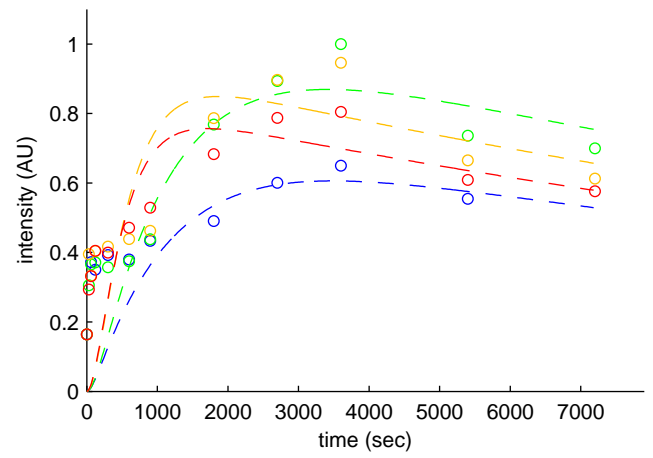
Swiss3T3_EGF_step, pRSK, simulation.



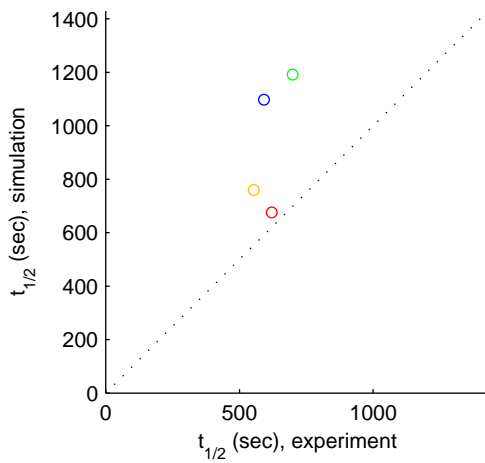
Swiss3T3_EGF_step, cJun, experiment.



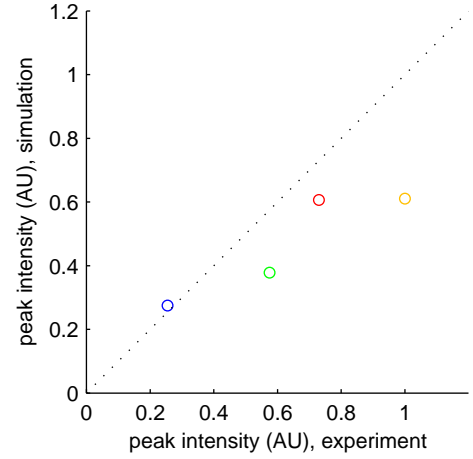
Swiss3T3_EGF_step, cJun, simulation.



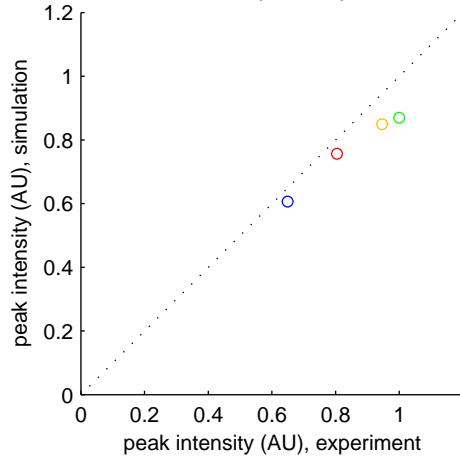
Swiss3T3_EGF_step, pRSK, $t_{1/2}$



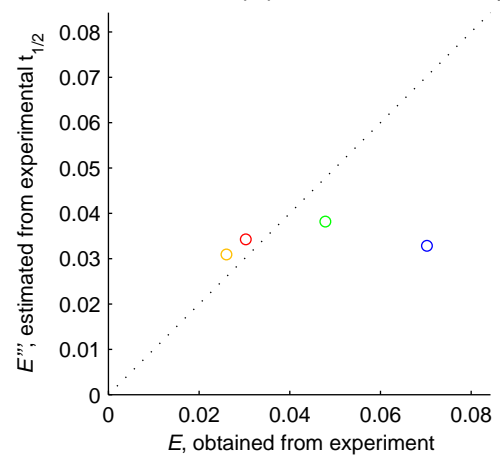
Swiss3T3_EGF_step, pRSK, peak intensity.



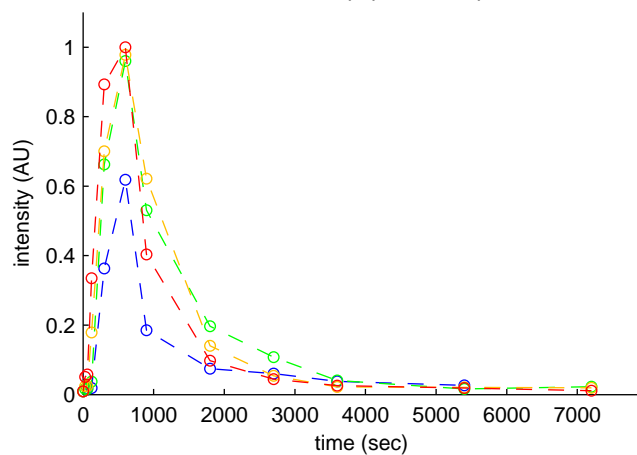
Swiss3T3_EGF_step, cJun, peak intensity.



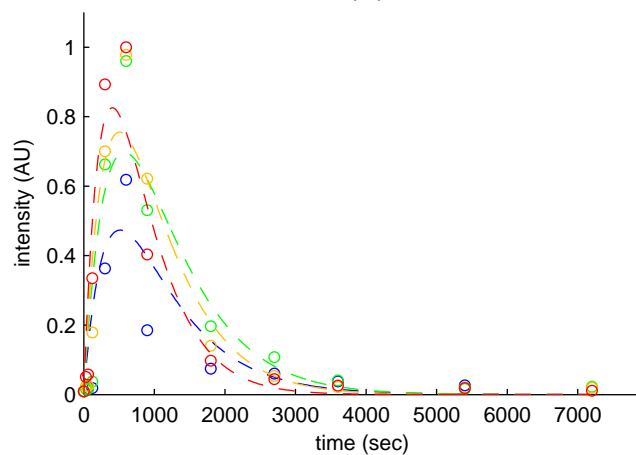
Swiss3T3_EGF_step, pRSK \rightarrow cJun, Efficiency (E).



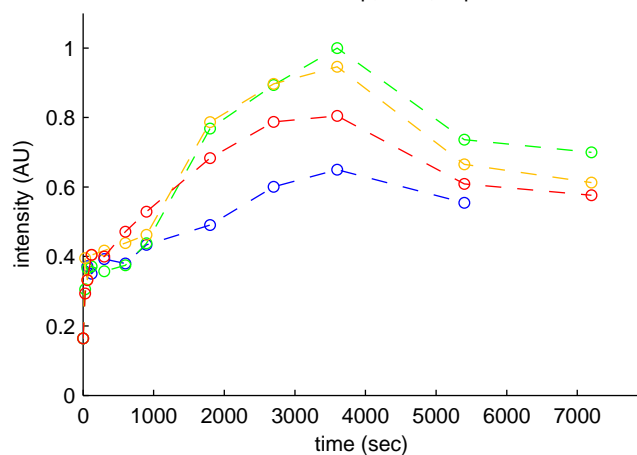
Swiss3T3_EGF_step, pCREB, experiment.



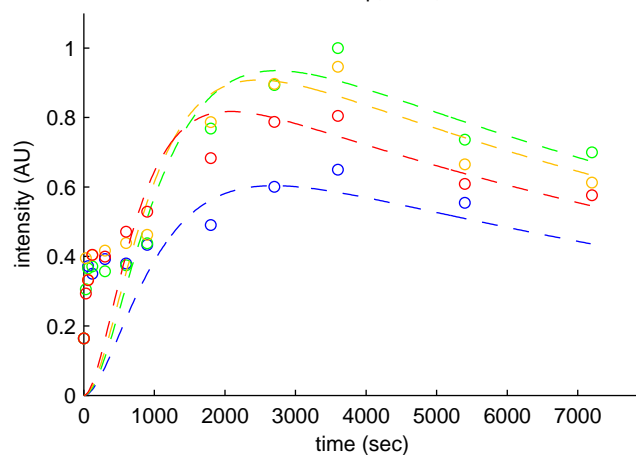
Swiss3T3_EGF_step, pCREB, simulation.



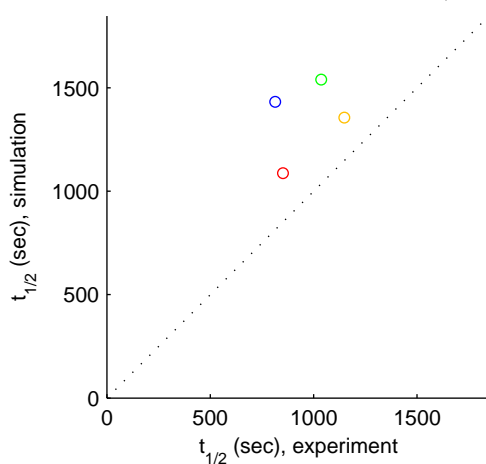
Swiss3T3_EGF_step, cJun, experiment.



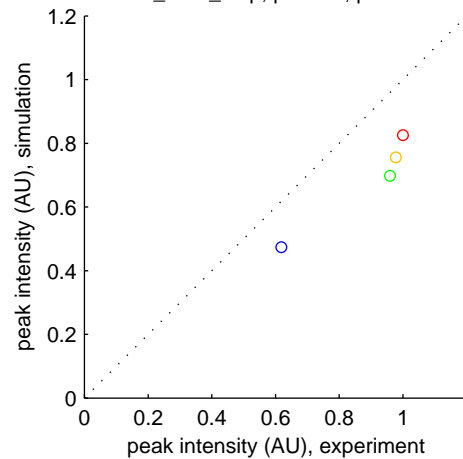
Swiss3T3_EGF_step, cJun, simulation.



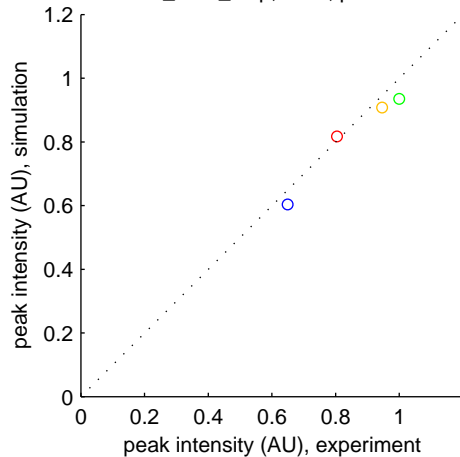
Swiss3T3_EGF_step, pCREB, $t_{1/2}$



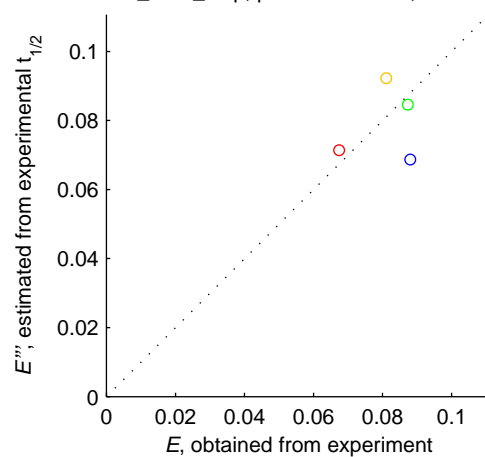
Swiss3T3_EGF_step, pCREB, peak intensity.



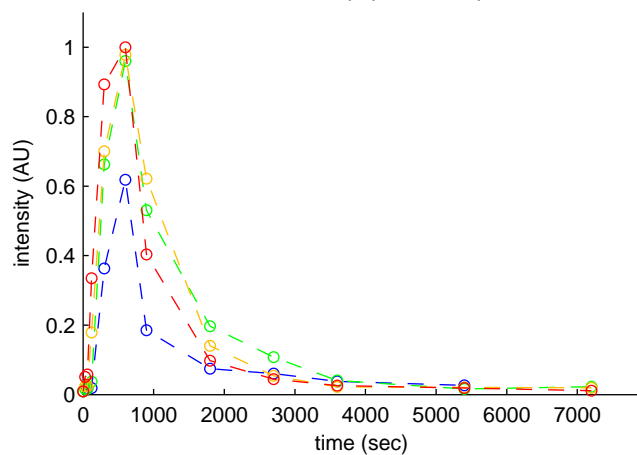
Swiss3T3_EGF_step, cJun, peak intensity.



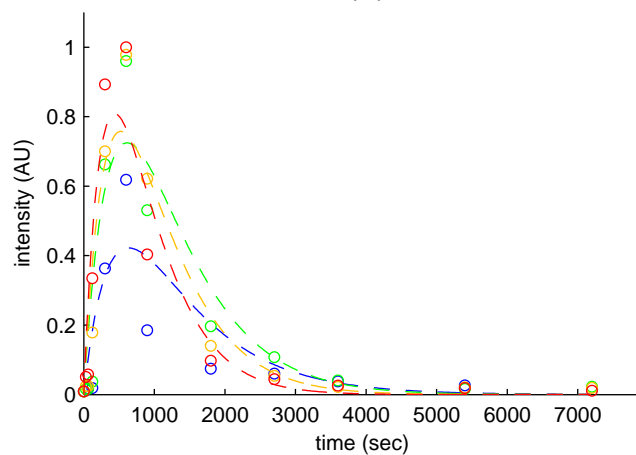
Swiss3T3_EGF_step, pCREB \rightarrow cJun, Efficiency (E).



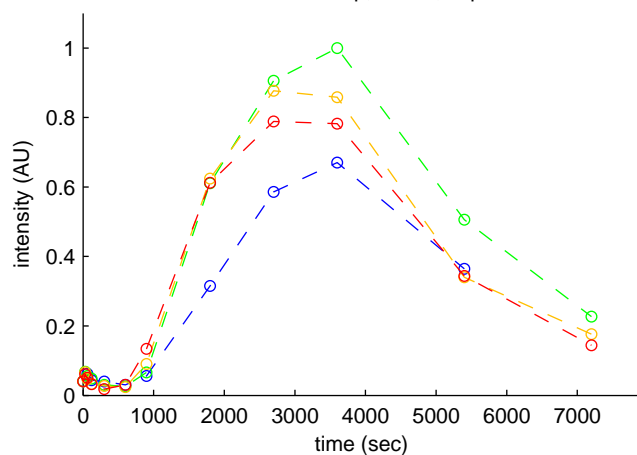
Swiss3T3_EGF_step, pCREB, experiment.



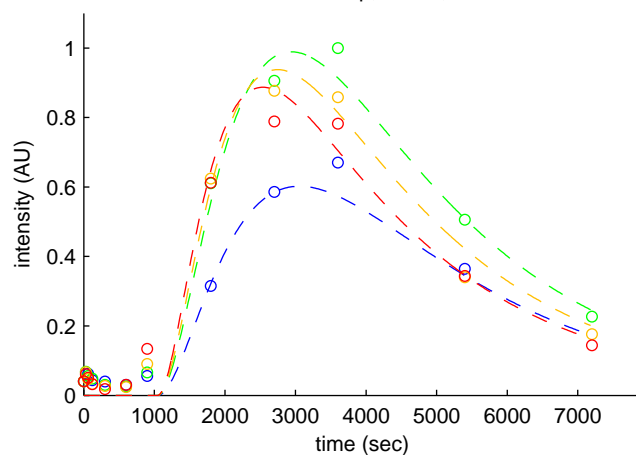
Swiss3T3_EGF_step, pCREB, simulation.



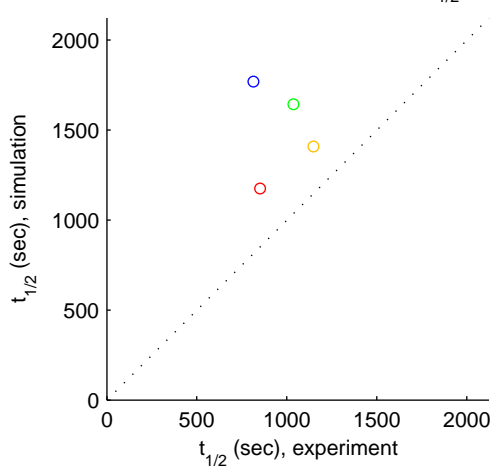
Swiss3T3_EGF_step, EGR1, experiment.



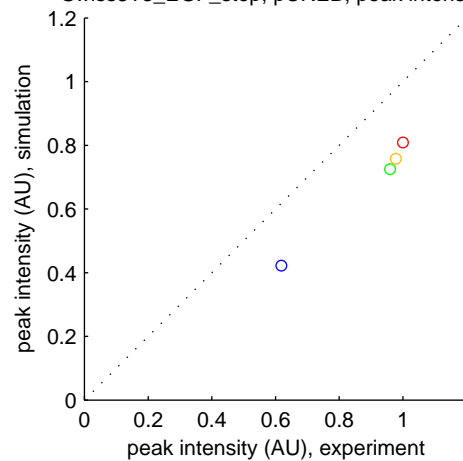
Swiss3T3_EGF_step, EGR1, simulation.



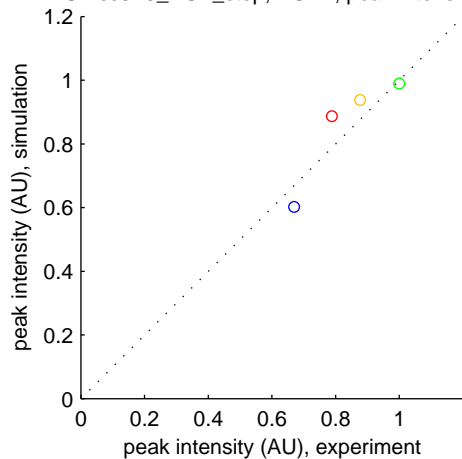
Swiss3T3_EGF_step, pCREB, $t_{1/2}$



Swiss3T3_EGF_step, pCREB, peak intensity.



Swiss3T3_EGF_step, EGR1, peak intensity.



Swiss3T3_EGF_step, pCREB \rightarrow EGR1, Efficiency (E).

