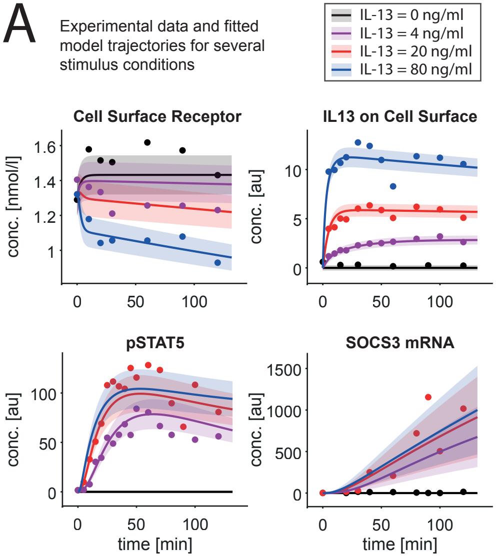
A Experimental data and fitted model trajectories for several stimulus conditions

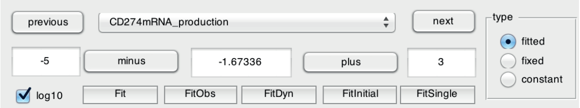


B Exemplary setup script for model fitting and plotting

```
arInit
arLoadModel('il13_jak2_stat5');
arLoadData('MedB1_real_data');
arCompileAll;

arFit;
arPlot;
arPrint;
```

C Manual adjustment of parameters using the *arTuner* GUI



D Print current paramter values to the Matlab command line using *arPrint*

```
Parameters: # = free, C = constant, D = dynamic, I = initial value, E = error model

          name                          lb       value        ub        10^value        fitted    prior
#    1|D  | CD274mRNA_production       |    -5       -1.7        +3 | 1      +0.021 |         1 | uniform(-5,3)
#    2|D  | DecoyR_binding             |    -5       -2.4        +3 | 1     +0.0039 |         1 | uniform(-5,3)
#    3|D  | JAK2_p_inhibition          |    -5       -1.1        +3 | 1      +0.078 |         1 | uniform(-5,3)
#    4|D  | JAK2_phosphorylation       |    -5    +0.0075        +3 | 1          +1 |         1 | uniform(-5,3)
#    5|D  | Kon_IL13Rec                |    -5       -2.6        +3 | 1     +0.0023 |         1 | uniform(-5,3)
#    6|D  | Rec_intern                 |    -5      -0.46        +3 | 1       +0.34 |         1 | uniform(-5,3)
#    7|D  | Rec_phosphorylation        |    -5         +3        +3 | 1      +1e+03 |         1 | uniform(-5,3)
#    8|D  | Rec_recycle                |    -5       -2.7        +3 | 1     +0.0021 |         1 | uniform(-5,3)
...
```

E Snippet of the model structure as network graph