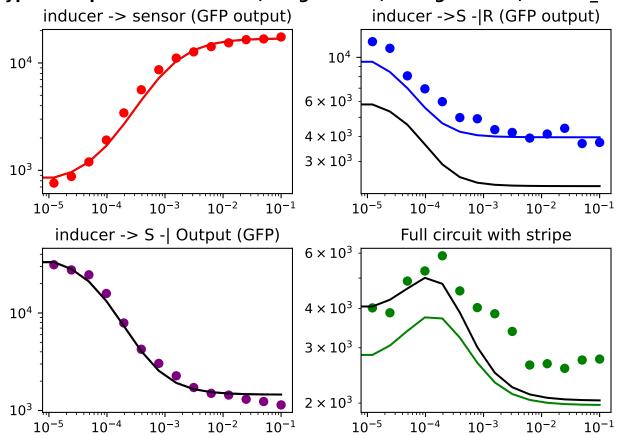
['SM data type data plots for mutation', 'Regulator4', 'using model:', 'model\_hill.model\_2']



time elapsed for this fit --- 131.4553599357605 seconds ---

Converged Converged

Converged

Converged

Across all four plots:

RSS (converged)=0.522

RSS (initial)=1.425

RSS (% reduction)=0.732

```
epsilon Initial guesses
                               Converged
A s 0.000000e+00
                   7.671584e+02 7.671584e+02
B s 0.000000e+00
                   1.694202e+04 1.694202e+04
C s 0.000000e+00
                   8.969736e+02 8.969736e+02
N s 0.000000e+00
                   2.229804e+03 3.939308e+03
A r 1.709504e+03
B r 1.470210e+10
                   8.961652e+03 1.470210e+10
C r 4.636301e+00
                  1.461384e-03 4.637762e+00
N r -5.674730e-02
                  1.841235e+00 1.784488e+00
A o 0.000000e+00
                   9.859837e+02 9.859837e+02
B o 0.000000e+00
                   1.801530e+07 1.801530e+07
C o 0.000000e+00
                   1.010522e-01 1.010522e-01
N o 0.000000e+00
                   1.417996e+00 1.417996e+00
F o 0.000000e+00
                   1.477611e+00 1.477611e+00
```

```
message: Optimization terminated successfully.
                                 success: True
                                  status: 0
                                    fun: 0.5217621691986053
                                     x: [7.672e+02 1.694e+04 ... 1.418e+00 1.478e+00]
                                    nit: 47868
                                   nfev: 65519
1.151182e+00 1.151182e+00 final simplex: (array([[ 7.672e+02, 1.694e+04, ..., 1.418e+00,
                                            1.478e+00],
                                           [7.672e+02, 1.694e+04, ..., 1.418e+00,
                                            1.478e+00],
                                           [7.672e+02, 1.694e+04, ..., 1.418e+00,
                                            1.478e + 00],
                                           [7.672e+02, 1.694e+04, ..., 1.418e+00,
                                            1.478e+00]]), array([5.218e-01, 5.218e-01, ..., 5.218e-01, 5.218e-01]))
```