

SUPPLEMENTARY MATERIAL

ESTIMATED REACTION RATE CONSTANTS FOR WILD-TYPE CELLS

$k_{in,Sa}$	98.9476
$k_{SaP,Sa}$	0.0043
$k_{DHCer,,Sa}$	1.4431
$k_{Sa,SaP}$	0.0091
$k_{Sa,DHCer}$	1.0362e + 04
$k_{DHGC,DHCer}$	1.6826
$k_{DHSM,DHCer}$	11.4186
$k_{Cer,DHCer}$	4.0843
$k_{DHCer,DHGC}$	2.9521
$k_{DHCer,DHSM}$	1.2753
$k_{DHCer,Cer}$	79.9867
$k_{GC,Cer}$	0.0345
$k_{SM,Cer}$	0.0025
$k_{So,Cer}$	4.1425
$k_{Cer,GC}$	0.0297
$k_{Cer,SM}$	0.6535
$k_{Cer,So}$	7.0930
$k_{SoP,So}$	9.1800
$k_{So,SoP}$	1.9684
$k_{SoP,out}$	13.5627

ESTIMATED REACTION RATE CONSTANTS FOR TREATED CELLS, I.E., SPT 1/2 OVER-EXPRESSING:

$k_{in,Sa}$	360.7027
$k_{SaP,Sa}$	0.0028
$k_{DHCer,,Sa}$	0.0736
$k_{Sa,SaP}$	0.2271
$k_{Sa,DHCer}$	14.5170
$k_{DHGC,DHCer}$	35.6403
$k_{DHSM,DHCer}$	8.5091
$k_{Cer,DHCer}$	13.1570
$k_{DHCer,DHGC}$	0.0838
$k_{DHCer,DHSM}$	3.9688
$k_{DHCer,Cer}$	6.2111
$k_{GC,Cer}$	6.1811e-06
$k_{SM,Cer}$	0.0038
$k_{So,Cer}$	0.0876
$k_{Cer,GC}$	0.0302
$k_{Cer,SM}$	0.1353
$k_{Cer,So}$	0.3788
$k_{SoP,So}$	13.9785
$k_{So,SoP}$	1.4213
$k_{SoP,out}$	6.7860