SBMLsqueezer: Differential Equation System "untitled"

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1 Rate Laws

1.1 Reaction: re1

$$v_1 = \mathtt{vmaf\_re1} \cdot \frac{\left([\mathtt{s1}] \cdot \mathrm{vol}\left(\mathtt{c1}\right)\right)^{\mathtt{hic\_re1\_s1}}}{\left([\mathtt{s1}] \cdot \mathrm{vol}\left(\mathtt{c1}\right)\right)^{\mathtt{hic\_re1\_s1}} + \mathtt{ksp\_re1\_s1}^{\mathtt{hic\_re1\_s1}}} \tag{1}$$

1.2 Reaction: re2

$$v_2 = [\mathtt{s3}] \cdot \mathrm{vol}\left(\mathtt{c1}\right) \cdot \frac{\mathtt{kcrf\_re2\_s3} \cdot \frac{[\mathtt{s4}] \cdot \mathrm{vol}(\mathtt{c1})}{\mathtt{kmc\_re2\_s4\_s3}} \cdot \frac{[\mathtt{s5}] \cdot \mathrm{vol}(\mathtt{c1})}{\mathtt{kmc\_re2\_s5\_s3}} - \mathtt{kcrr\_re2\_s3} \cdot \frac{[\mathtt{s6}] \cdot \mathrm{vol}(\mathtt{c1})}{\mathtt{kmc\_re2\_s6\_s3}}}{\left(1 + \frac{[\mathtt{s4}] \cdot \mathrm{vol}(\mathtt{c1})}{\mathtt{kmc\_re2\_s4\_s3}}\right) \cdot \left(1 + \frac{[\mathtt{s5}] \cdot \mathrm{vol}(\mathtt{c1})}{\mathtt{kmc\_re2\_s5\_s3}}\right) + \frac{[\mathtt{s6}] \cdot \mathrm{vol}(\mathtt{c1})}{\mathtt{kmc\_re2\_s6\_s3}}} \tag{2}$$

1.3 Reaction: re3

$$v_3 = [\mathtt{s8}] \cdot \mathrm{vol}\left(\mathtt{c1}\right) \cdot \frac{\frac{\mathtt{kcrf\_re3\_s8}}{\mathtt{kmc\_re3\_s6\_s8}} \cdot [\mathtt{s6}] \cdot \mathrm{vol}\left(\mathtt{c1}\right) - \frac{\mathtt{kcrr\_re3\_s8}}{\mathtt{kmc\_re3\_s7\_s8}} \cdot [\mathtt{s7}] \cdot \mathrm{vol}\left(\mathtt{c1}\right)}{1 + \frac{[\mathtt{s6}] \cdot \mathrm{vol}(\mathtt{c1})}{\mathtt{kmc\_re3\_s6\_s8}} + \frac{[\mathtt{s7}] \cdot \mathrm{vol}(\mathtt{c1})}{\mathtt{kmc\_re3\_s7\_s8}}} \tag{3}$$

1.4 Reaction: re4

$$v_4 = \mathtt{vmaf\_re4} \cdot \frac{\left([\mathtt{s2}] \cdot \mathrm{vol}\left(\mathtt{c1}\right)\right)^{\mathtt{hic\_re4\_s2}}}{\left([\mathtt{s2}] \cdot \mathrm{vol}\left(\mathtt{c1}\right)\right)^{\mathtt{hic\_re4\_s2}} + \mathtt{ksp\_re4\_s2}^{\mathtt{hic\_re4\_s2}}} \tag{4}$$

1.5 Reaction: re5

$$v_5 = \mathtt{zkass\_re5} - \mathtt{kdiss\_re5} \tag{5}$$

1.6 Reaction: re6

$$v_6 = \mathtt{zkass\_re6} - \mathtt{kdiss\_re6} \tag{6}$$

2 Equations

2.1 Species: s11

$$\frac{\mathrm{d}[\mathrm{s}_{11}]}{\mathrm{dt}} = -v_1 \tag{7}$$

2.2 Species: s2

$$\frac{\mathrm{d}[\mathrm{s}_2]}{\mathrm{d}t} = 0 \tag{8}$$

2.3 Species: s1

$$\frac{\mathrm{d}[\mathrm{s}_1]}{\mathrm{d}t} = 0 \tag{9}$$

2.4 Species: s4

$$\frac{\mathrm{d}[\mathrm{s}_4]}{\mathrm{dt}} = -v_2 \tag{10}$$

2.5 Species: s5

$$\frac{\mathrm{d}[\mathrm{s}_5]}{\mathrm{dt}} = -v_2 \tag{11}$$

2.6 Species: s6

$$\frac{\mathrm{d}[\mathrm{s}_6]}{\mathrm{dt}} = -v_3 \tag{12}$$

2.7 Species: s3

$$\frac{\mathrm{d}[\mathrm{s}_3]}{\mathrm{dt}} = -v_5 \tag{13}$$

2.8 Species: s7

$$\frac{\mathrm{d}[\mathrm{s}_7]}{\mathrm{d}t} = 0 \tag{14}$$

2.9 Species: s8

$$\frac{\mathrm{d}[\mathrm{s}_8]}{\mathrm{dt}} = -v_6 \tag{15}$$

2.10 Species: s12

$$\frac{\mathrm{d}[\mathrm{s}_{12}]}{\mathrm{dt}} = -v_4 \tag{16}$$

2.11 Species: s9 (sa3_degraded)

$$\frac{\mathrm{d}[\mathrm{s}_9]}{\mathrm{d}t} = 0 \tag{17}$$

2.12 Species: s10 (sa8_degraded)

$$\frac{\mathrm{d}[\mathrm{s}_{10}]}{\mathrm{d}t} = 0 \tag{18}$$

3 Species

Species	Initial concentration	compartment
s_{11}	NaN	c1
s_2	NaN	c1
s_1	NaN	c1
s_4	NaN	c1
s_5	NaN	c1
s_6	NaN	c1
s_3	NaN	c1
s_7	NaN	c1
s_8	NaN	c1
s_{12}	NaN	c1
s_9	NaN	c1
s_{10}	NaN	c1

4 Compartments

Compartment	Volume
c_1	1.0

For a more comprehensive LaTeX export, see
http://www.ra.cs.uni-tuebingen.de/software/SBML2LaTeX