



maintenance_fun constant

keep_ribosome_kcat FALSE keep_transport_kcat FALSE

ľ
0
-0.9
0
-0.1
0
0
1

K

	tC	ATPS	EAA	ENT	RNAp	DNAp	r
x_C	0.1	0	0	0	0	0	0
С	0	1	1	1	0	0	0
AA	0	0	0	0	0	0	2
NT	0	0	0	0	5	5	0
ATP	0	0	0	0	0	0	8
RNA	0	0	0	0	0	0	0
DNA	0	0	0	0	0	0	0
р	0	0	0	0	0	0	0

r
0
0
0
0
0
25
0
0
2

kcat

	[,1]	[,2]	[,3]	[,4]	[,5]	[,6]	[,7]	
kcatf	10	10	5	20	12	13	23	
kcatb	0	0	0	0	0	0	0	

Keq

minimal phi constraint

minimal f constraint