





0.8 - 0.6 - 0.4 - 0.4 - 0.6 0.8 1

Growth rate μ (h<sup>-1</sup>)

maintenance\_fun constant

keep\_ribosome\_kcat FALSE keep\_transport\_kcat FALSE

	tC	FERM	RESP	ACT	EAA	ENT	RNAp	DNAp	r
С	1	-1	-1	0	0	0	Ō	0	0
ı	0	0.4	0.2	-0.2	0	0	0	0	0
Р	0	0	0	1	-1	-0.45	0	0	0
AA	0	0	0	0	1	-0.45	0	0	-0.9
NT	0	0	0	0	0	1	-1	<b>–1</b>	0
ATP	0	0.4	8.0	-0.8	0	-0.1	0	0	-0.1
RNA	0	0	0	0	0	0	1	0	0
DNA	0	0	0	0	0	0	0	1	0
р	0	0	0	0	0	0	0	0	1

tC	FERM	RESP	ACT	EAA	ENT	RNAp	DNAp	r
0.1	0	0	0	0	0	0	0	0
0	10	20	0	0	0	0	0	0
0	5	10	0	0	0	0	0	0
0	0	0	3	0	0	0	0	0
0	0	0	0	2	2	0	0	0
0	0	0	0	0	3	0	0	3
0	0	0	0	0	0	2	2	0
0	0	0	2	0	2	0	0	2
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
			0.1 0 0	0.1 0 0 0	0.1 0 0 0 0	0.1 0 0 0 0 0	0.1 0 0 0 0 0	0.1 0 0 0 0 0 0

KA

tC	FERM	RESP	ACT	EAA	ENT	RNAp	DNAp	r
0	0	0	0	0	0	Ō	Ō	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	40
0	0	0	0	0	0	4	4	0
0	0	0	0	0	0	0	0	0
	tC 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tC FERM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tC FERM RESP 0	tC         FERM         RESP         ACT           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0	tC         FERM         RESP         ACT         EAA           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0	tC         FERM         RESP         ACT         EAA         ENT           0         0         0         0         0         0           0         0         0         0         0         0         0           0         0         0         0         0         0         0         0         0           0	tC         FERM         RESP         ACT         EAA         ENT         RNAp           0         0         0         0         0         0         0         0           0	tC         FERM         RESP         ACT         EAA         ENT         RNAp         DNAp           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0         0           0         0         0         0         0         0         0

#### kcat

	tC	FERM	RESP	ACT	EAA	ENT	RNAp	DNAp	r
kcatf	29	400	100	115	7	45	6	13	4
kcatb	0	0	0	0	0	0	0	0	0

#### Keq



# phi input

[1,]	<b>[,1]</b> 0.065	<b>[,2]</b> 0.024	<b>[,3]</b> 0.024	<b>[,4]</b> 0.024	<b>[,5]</b> 0.248	<b>[,6]</b> 0.032	<b>[,7]</b> 0.12	<b>[,8]</b> 0.003	<b>[,9]</b> 0.46

## average saturation input

## minimal phi constraint

[1,]

### minimal f constraint

	[,1]	[,2]	[,3]	[,4]	[,5]	[,6]	[,7]	[,8]	[,9]
[1,]	Ō	Ō	Ō	Ō	Ō	Ō	Ō	Ō	Ō