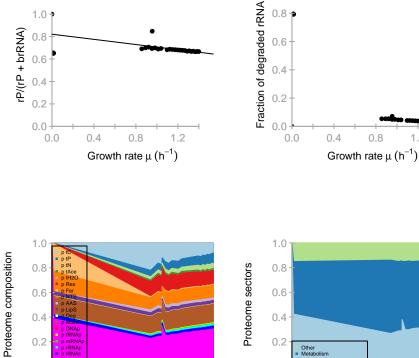
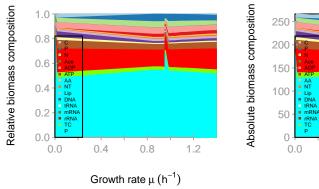
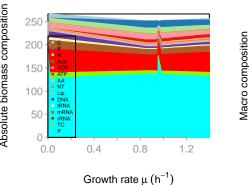
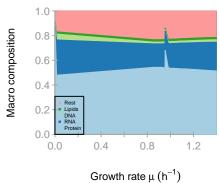


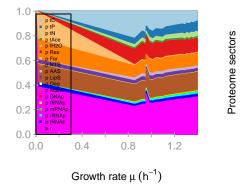
### Protein mass fraction in ribosome

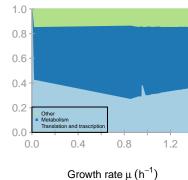












	tC	tP	tN	tAce	tH2O	Res	Fer	NTS	AAS	LipS	Deg	Maint	DNAp	tRNAp	mRNAp	rRNAp	tRNAc	r
С	1	0	0	0	0	-0.002	-0.02	-0.175	-0.76	-0.112	ŏ	0	Ō	Ö	Ö	Ō	0	0
P	0	1	0	0	0	-0.124	-0.12	0.046	0	0.102	0	0	0	0	0	0	0.002	0.008
N	0	0	1	0	0	0	0	-0.079	-0.24	-0.004	0	0	0	0	0	0	0	0
Ace	0	0	0	-1	0	0.002	0.02	0	0	0	0	0	0	0	0	0	0	0
H2O	0	0	0	0	1	0.072	0.07	-0.054	0	-0.064	0	0	0	0	0	0	-0.001	-0.004
ADP	0	0	0	0	0	-0.874	0.91	0.657	0	0.774	0	1	0	0	0	0	0.013	0.053
ATP	0	0	0	0	0	0.926	-0.86	-0.692	0	-0.82	0	-1	0	0	0	0	-0.014	-0.057
AA	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	-0.005	0
NT	0	0	0	0	0	0	0	0.297	0	0	1	0	-1	-1	-1	-1	0	0
Lip	0	0	0	0	0	0	0	0	0	0.124	0	0	0	0	0	0	0	0
DNA	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
tRNA	0	0	0	0	0	0	0	0	0	0	-0.1	0	0	1	0	0	-0.98	0.934
mRNA	0	0	0	0	0	0	0	0	0	0	-0.1	0	0	0	1	0	0	0
rRNA	0	0	0	0	0	0	0	0	0	0	-0.8	0	0	0	0	1	0	0
TC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.985	-0.939
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.005

	tC	tΡ	tN	tAce	tH2O	Res	Fer	NTS	AAS	LipS	Deg	Maint	DNAp	tRNAp	mRNAp	rRNAp	tRNAc	r
x_C	1	0	0	0	0	0	0	0	0	0	Ō	0	0	0	0	0	0	0
x_P	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
x_N	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
x_Ace	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
x_H2O	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
С	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0
P	0	0	0	0	0	1	1	1	0	10	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0
Ace	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Ace H2O	0	0	0	0	0	800	800	800	0	750	0	0	0	0	0	0	800	800
ADP	0	0	0	0	0	10	10	10	0	0	0	0	0	0	0	0	0	0
ATP	0	0	0	0	0	1	1	1	0	1	0	1	0	0	0	0	1	1
AA	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	1	0
NT	0	0	0	0	0	0	0	10	0	0	0	0	1	1	1	1	0	0
Lip	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0
DNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
tRNA	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0
mRNA	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	0	0	5	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	1
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	tC	tP	tN	tAce	tH2O	Res	Fer	NTS	AAS	LipS	Deg	Maint	DNAp	RNAp	mRNAp	rRNAp	tRNAc	r
x_C	0	0	0	0	0	0	0	0	0	0	Ō	0	0	0	0	0	0	0
x_P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
x_N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
x_Ace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
x_H2O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
С	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H2O ADP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AA NT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lip	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DNÀ	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	0	0
tRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
mRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
rRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
TC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Р	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## kcat

	[1]	[2]	[3]	Γ <i>Δ</i> 1	[5]	[6]	f <b>7</b> 1	181	19 1	[ 10]	[ 11]	[ 12]	[ 13]	[ 1 <b>4</b> ]	[ 15]	[ 16]	[ 17]	[ 18]
	[,.]	L,~J	[,0]	[,-]	[,0]	[,0]	L,, 1	[,0]	[,0]	[,.0]	[,]	[,·~]	[, ]	[,]	[,.0]	[,.0]	[,.,]	[,.0]
kcatf					<b>[,5]</b> 40000													
kcatb	20	4	4	2	40000	90	90	10	10	5	0	0	0	0	0	0	0	0

# Keq

[1,]	[,1] 10	[,2] 10	<b>[,3]</b> 10	<b>[,4]</b> 200	[,5] 1	<b>[,6]</b> 800	[,7] 80000	<b>[,8]</b> 1.25	<b>[,9]</b> 100	[,1 <b>0</b> ]	[,11] Inf	[,12] Inf	[ <b>,13]</b> Inf	<b>[,14]</b> Inf	[ <b>,15</b> ] Inf	<b>[,16]</b> Inf	<b>[,17]</b> Inf	[,18] Inf

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minimal	f	constraint
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[,1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] [,10] [,11] [,12] [,13] [,14] [,15] [,16] [,17] [,18] 0 0 0 0 0.7 0 0 0 0.02 0 0 0 0 0 0 0 0 0

[1,]