

Comparison with experimental flux measurements of a pyk knockout

The following table summarizes the data from Emmerling et al., J. Bacteriology, 184(1), 152-164 (2002), that we used for comparing MOMA an FBA predictions for intracellular fluxes. Each row refers to a different flux, as labeled in the first column. The numbering is the same as the one from Emmerling et al. The second column indicates the name of the genes and corresponding fluxes in FBA and MOMA, as used for plotting figure 4. The numbers through which the same fluxes are recognized in the FBA/MOMA software is indicated in column 3. Column 4 through 6 show the experimental values reported for the wild type, and columns 7 through 9 the one for the wild type, under the three different nutrient uptake conditions explored.

flux #	Flux	FBA#	S-wt-g0.09	S-wt-g0.4	S-wt-n0.09	S-ko-g0.09	S-ko-g0.4	S-ko-n0.09
v1	PGI	2,3,4	54	77	96	99	71	60
v2	GND	28	44	21	1	1	28	31
v3	PFKB,PFKA1	7,8	77	85	94	96	83	79
v4	TKTA2	34,35	15	2	-2	-3	5	9
v5	TKTA1	32,33	17	6	0	0	8	10
v6	TAL	36	17	6	0	0	8	10
v7	PGK	14	169	172	186	189	171	166
v8	ENO	17	159	159	180	180	159	161
v9	PYK, GLCPTS	19,20,614	123	119	131	100	100	100
v10	ACEE	21	108	99	147	138	105	122
v11	GLTA	39	93	80	73	123	77	67
v12	SUCA	43	83	68	67	115	67	50
v13	FUM	47,48,49	83	68	67	115	67	46
v14	MDH	50	75	61	34	57	37	14
v15	MAEB	63	7	7	33	59	30	32
v16	PPC	62	56	45	47	256	77	124
v17	PCK	61	28	12	1	180	24	66

Legend for metabolite names

G6P, glucose-6-phosphate

F6P, fructose-6-phosphate

P5P, pentose phosphates

E4P, erythrose-4-phosphate

S7P, seduheptulose-7-phosphate

T3P, triose-3-phosphate

PGA, 3-phosphoglycerate

ACA, acetyl-coenzyme A

OGA, 2-oxoglutarate

PYR. pyruvate

FUM, fumarate

MAL, malate

OAA, oxaloacetate

PEP, phosphoenolpyruvate