

Table S4: Reaction ranks according to functional centrality (FC).

Reaction ID	LAC	ATP			Reaction ID	LAC	ATP		
	O ₂	O ₂	NO ₃	Ferm		O ₂	O ₂	NO ₃	Ferm
glk	7	27	26	14	pntAB	7	26	24	15
pgi	2	11	10	3	udhA	6	9	9	10
pfk	2	17	13	2	atp	7	1	2	11
fba	2	13	11	1	nuo	7	4	4	11
tpiA	4	14	11	2	ndh	7	24	27	15
gapA	1	18	17	7	cyoABCD	7	5	31	15
pgk	1	18	17	7	cydAB	7	17	31	15
gpm	1	18	17	7	narGHI	7	11	1	15
eno	1	18	17	7	poxB	7	19	23	15
pyk	4	17	14	4	sdhABCD	7	16	19	13
aceEF	7	13	17	12	sdhABCD_r2	7	20	21	14
maeB	7	31	30	15	pflB	7	15	16	8
maeA	7	30	29	15	fdhF	7	22	23	14
pck	7	31	30	15	adhE	7	31	22	5
fbp	6	20	21	15	adhE_r2	7	31	22	5
pps	6	29	28	15	pta	7	11	11	6
zwf	6	17	18	10	ack	7	11	11	6
pgl	6	17	18	10	acs	7	31	30	15
gnd	7	11	15	14	dld	7	28	29	15
rpiA	7	11	15	14	ldhA	1	19	17	7
rpe	7	11	15	14	edd	6	25	22	10
tkr	7	11	15	14	eda	6	25	22	10
tkr_r2	7	11	15	14	mgsA	3	32	31	15
tal	7	11	15	14	ptsGHI	1	19	17	7
gltA	7	6	6	14	co2	7	2	3	14
acnA	7	6	5	14	o2	7	3	31	15
acnA_r2	7	6	5	14	no3	7	11	1	15
icd	7	10	10	15	no2	7	11	1	15
sucAB	7	10	10	15	eth	7	31	22	5
sucCD	7	10	10	15	ac	7	8	8	6
frdABCD	7	21	21	14	succ	7	26	25	11
fumA	7	7	7	11	lac	1	19	17	7
mdh	7	12	12	11	pyr	7	11	19	15
mgo	7	23	25	15	focA	7	21	20	9
aceA	7	11	16	15	mglABC	7	27	26	14
aceB	7	11	16	15	maint	5	19	17	7
ppc	7	29	27	11	biomass	7	33	31	15

The table shows FCs for the metabolic function of lactate production (LAC) under conditions of aerobic respiration (O₂), and ATP production (ATP) under conditions of aerobic respiration (O₂), nitrate respiration (NO₃) and fermentation (Ferm). Reactions can obtain same ranks resulting in different numbers of total ranks in the considered settings. Low rank number corresponds to high FC.