

Twos			GPR Association	Nopt	Description	Regulon	Data-R	Data-P
2-1	12PPDt	12ppd-S[e] <==> 12ppd-S[c]		502	Degradation	NA	NA	NA
2-1	LCAR	[c]h + lald-L + nadh <==> 12ppd-S + nad	b2799	502	Degradation	NA	NA	NA
2-2	3HPPPNH	[c]3hpppn + h + nadh + o2 --> dhpppn + h2o + nad	b0347	500	Degradation	0/2	0.55	0.17
2-2	HPPPNt2r	3hpppn[e] + h[e] <==> 3hpppn[c] + h[c]	b0353	500	Degradation	0/2	0.55	0.17
2-3	5DGLCNR	[c]5dglcn + h + nadph <==> glcn + nadp	b4266	903	Degradation	2/2	0.06	0.50
2-3	IDONt2r	h[e] + idon-L[e] <==> h[c] + idon-L[c]	b4265	903	Degradation	2/2	0.06	0.50
2-4	ABUTD	[c]4abutn + h2o + nad --> 4abut + (2) h + nadh		500	Degradation	NA	NA	NA
2-4	PTRCTA	[c]akg + ptrc --> 4abutn + glu-L		500	Degradation	NA	NA	NA
2-5	ACACCT	[c]acac + accoa --> aacoa + ac	(b2221 and b2222)	500	Degradation	3/3	0.71	0.08
2-5	ACAct2	acac[e] + h[e] <==> acac[c] + h[c]	b2223	500	Degradation	3/3	0.71	0.08
2-6	ACOATA	[c]ACP + accoa <==> acACP + coa	b1091	25741	Biosynthesis	0/2	0.47	0.23
2-6	KAS14	[c]acACP + h + malACP --> ACP + actACP + co2	(b2323 or b1095)	25741	Biosynthesis	0/2	0.47	0.23
2-7	ADHEr	[c]accoa + (2) h + (2) nadh <==> coa + etoh + (2) nad	b1241	12161	Degradation	NA	NA	NA
2-7	ETOHT2r	etoh[e] + h[e] <==> etoh[c] + h[c]		12161	Degradation	NA	NA	NA
2-8	ADSL1r	[c]dcamp <==> amp + fum	b1131	54805	Other	2/2	0.61	0.14
2-8	ADSS	[c]asp-L + gtp + imp --> dcamp + gdp + (2) h + pi	b4177	54805	Other	2/2	0.61	0.14
2-9	ALCD19	[c]glyald + h + nadh <==> glyc + nad	b0356	501	Degradation	0/2	-0.06	0.58
2-9	GLYALDt	glyald[e] <==> glyald[c]	b3927	501	Degradation	0/2	-0.06	0.58
2-10	AMALT4	[c]malt + malthx --> glc-D + malthp	b3416	1176	Degradation	2/2	0.13	0.45
2-10	MLTP3	[c]malthp + pi <==> g1p + malthx	b3417	1176	Degradation	2/2	0.13	0.45
2-11	ASNN	[c]asn-L + h2o --> asp-L + nh4	(b1767 or b2957 or b0828)	500	Degradation	NA	NA	NA
2-11	ASNt2r	asn-L[e] + h[e] <==> asn-L[c] + h[c]		500	Degradation	NA	NA	NA
2-12	CYTK2	[c]atp + dcmp <==> adp + dcdp	b0910	108	Other	0/2	-0.60	0.93
2-12	NTD3	[c]dcmp + h2o --> dcyt + pi	b0480	108	Other	0/2	-0.60	0.93
2-13	D-LACT2	h[e] + lac-D[e] <==> h[c] + lac-D[c]	(b3603 or b2975)	500	Degradation	0/2	0.24	0.38
2-13	LDH_D	[c]lac-D + nad <==> h + nadh + pyr	(b2133 or b1380)	500	Degradation	0/2	0.24	0.38
2-14	DADK	[c]atp + damp <==> adp + dadp	b0474	9422	Other	0/2	-0.64	0.95
2-14	NTD6	[c]damp + h2o --> dad-2 + pi	b0480	9422	Other	0/2	-0.64	0.95
2-15	DGK1	[c]atp + dgmp <==> adp + dgdp	b3648	15376	Other	0/2	0.11	0.46
2-15	NTD8	[c]dgmp + h2o --> dgsn + pi	b0480	15376	Other	0/2	0.11	0.46
2-16	DRPA	[c]2dr5p --> acald + g3p	b4381	40487	Other	2/2	0.73	0.07
2-16	PPM2	[c]2dr1p <==> 2dr5p	b4383	40487	Other	2/2	0.73	0.07
2-17	DSERt2r	h[e] + ser-D[e] <==> h[c] + ser-D[c]	b4208	500	Degradation	0/2	0.42	0.26
2-17	SERD_D	[c]ser-D --> nh4 + pyr	b2366	500	Degradation	0/2	0.42	0.26
2-18	FAO3	[c]atp + (9) coa + (8) fad + (8) h2o + (8) nad + ocdca --> (9) accoa + amp + (8) fadh2 + (8) h + (8) nadh + ppi	(b3845 and b3846 and b1805 and b0221)	500	Degradation	5/5	0.58	0.16
2-18	OCDCAt2	h[e] + ocdca[e] --> h[c] + ocdca[c]	b2344	500	Degradation	5/5	0.58	0.16
2-19	FRUK	[c]atp + f1p --> adp + fdp + h	b2168	575	Degradation	3/5	-0.50	0.88
2-19	FRUpts	fru[e] + pep[c] --> f1p[c] + pyr[c]	(b2167 and b2169 and b2415 and b2416)	575	Degradation	3/5	-0.50	0.88
2-20	G5SADs	[c]glu5sa --> 1pyr5c + h + h2o		56256	Biosynthesis	NA	NA	NA
2-20	P5CR	[c]1pyr5c + (2) h + nadph --> nadp + pro-L	b0386	56256	Biosynthesis	NA	NA	NA
2-21	G5SD	[c]glu5p + h + nadph --> glu5sa + nadp + pi	b0243	55756	Biosynthesis	2/2	0.16	0.43
2-21	GLU5K	[c]atp + glu-L --> adp + glu5p	b0242	55756	Biosynthesis	2/2	0.16	0.43
2-22	G6PDH2r	[c]g6p + nadp <==> 6pgl + h + nadph	b1852	22000	Other	NA	NA	NA
2-22	PGL	[c]6pgl + h2o --> 6pgc + h		22000	Other	NA	NA	NA
2-23	GALCTD	[c]galct-D --> 5dh4dglc + h2o	b3128	958	Degradation	2/2	0.27	0.36
2-23	GALCTt2r	galct-D[e] + h[e] <==> galct-D[c] + h[c]	b3127	958	Degradation	2/2	0.27	0.36
2-24	GALS3	[c]h2o + melib --> gal + glc-D	b4119	848	Degradation	2/2	0.87	0.01

2-24	MELIBt2	h[e] + melib[e] --> h[c] + melib[c]	b4120	848	Degradation	2/2	0.87	0.01
2-25	GLCRD	[c]glcr --> 5dh4dglc + h2o	(b2787 or b2788)	953	Degradation	2/2	0.24	0.38
2-25	GLCRt2r	glcr[e] + h[e] <==> glcr[c] + h[c]	(b3127 or b2789)	953	Degradation	2/2	0.24	0.38
2-26	GLYATi	[c]2aobut + coa --> accoa + gly	b3617	3243	Degradation	2/2	0.82	0.03
2-26	THRD	[c]nad + thr-L --> 2aobut + h + nadh	b3616	3243	Degradation	2/2	0.82	0.03
2-27	GSNK	[c]atp + gsn --> adp + gmp + h	b0477	16485	Other	0/2	0.55	0.18
2-27	PUNP3	[c]gsn + pi <==> gua + r1p	(b2407 or b4384)	16485	Other	0/2	0.55	0.18
2-28	HKNDDB	[c]h2o + hkndd --> (2) h + op4en + succ	b0349	1000	Degradation	2/2	0.71	0.08
2-28	HPPPNDO	[c]dhpppn + o2 --> hkndd	b0348	1000	Degradation	2/2	0.71	0.08
2-29	HOPNTAL	[c]4h2opntr --> acald + pyr	b0352	1500	Degradation	2/2	0.43	0.25
2-29	OP4ENH	[c]h2o + op4en --> 4h2opntr	b0350	1500	Degradation	2/2	0.43	0.25
2-30	HSK	[c]atp + hom-L --> adp + h + phom	b0003	34378	Biosynthesis	2/2	0.87	0.01
2-30	THRS	[c]h2o + phom --> pi + thr-L	b0004	34378	Biosynthesis	2/2	0.87	0.01
2-31	INDOLEt2r	h[e] + indole[e] <==> h[c] + indole[c]	b3161	500	Degradation	1/1	1.00	0.00
2-31	TRPt2r	h[e] + trp-L[e] <==> h[c] + trp-L[c]	(b3709 or b0112 or b3161)	500	Degradation	1/1	1.00	0.00
2-32	LACZ	[c]h2o + lcts --> gal + glc-D	(b0344 or b2132)	799	Degradation	2/2	0.23	0.38
2-32	LCTSt	h[e] + lcts[e] <==> h[c] + lcts[c]	b0343	799	Degradation	2/2	0.23	0.38
2-33	M1PD	[c]mnl1p + nad <==> f6p + h + nadh	b3600	500	Degradation	4/4	-0.01	0.55
2-33	MNLpts	mnl[e] + pep[c] --> mnl1p[c] + pyr[c]	(b3599 and b2415 and b2416)	500	Degradation	4/4	-0.01	0.55
2-34	PROD2	[c]fad + pro-L --> 1pyr5c + fadh2 + h	b1014	500	Degradation	0/2	-0.43	0.83
2-34	PROt4	h[e] + pro-L[e] <==> h[c] + pro-L[c]	b1015	500	Degradation	0/2	-0.43	0.83
2-35	RBK	[c]atp + rib-D --> adp + h + r5p	b3752	501	Degradation	5/5	0.24	0.38
2-35	RIBabc	atp[c] + h2o[c] + rib-D[e] --> adp[c] + h[c] + pi[c] + rib-D[c]	((b4231 and b4227 and b4228 and b4229 and b4230) or (b3749 and b3751 and b3750 and b3748))	501	Degradation	5/5	0.24	0.38
2-36	SBTPD	[c]nad + sbt6p <==> f6p + h + nadh	b2705	733	Degradation	6/6	-0.37	0.80
2-36	SBTpts	pep[c] + sbt-D[e] --> pyr[c] + sbt6p[c]	(b2415 and b2416 and b2702 and b2704 and b2703)	733	Degradation	6/6	-0.37	0.80
2-37	TARTD	[c]tartr-L --> h2o + oaa	(b3061 and b3062)	500	Degradation	2/3	0.53	0.19
2-37	TARTRt7	succ[c] + tartr-L[e] <==> succ[e] + tartr-L[c]	b3063	500	Degradation	2/3	0.53	0.19
2-38	TRE6PH	[c]h2o + tre6p --> g6p + glc-D	b4239	543	Degradation	5/5	0.12	0.46
2-38	TREpts	pep[c] + tre[e] --> pyr[c] + tre6p[c]	(b2417 and b2415 and b2416 and b4240)	543	Degradation	5/5	0.12	0.46
2-39	XPPT	[c]prpp + xan --> ppi + xmp	b0238	628	Degradation	0/2	-0.64	0.95
2-39	XTSnt2r	h[e] + xtsn[e] <==> h[c] + xtsn[c]	b2406	628	Degradation	0/2	-0.64	0.95

Threes			GPR Association	Nopt	Description	Regulon	Data-R	Data-P
3-1	ACNAMt2	acnam[e] + h[e] --> acnam[c] + h[c]	b3224	821	Degradation	0/3	0.34	0.17
3-1	ACNML	[c]acnam --> acmana + pyr	b3225	821	Degradation	0/3	0.34	0.17
3-1	AMANK	[c]acmana + atp --> acmanap + adp + h	b3222	821	Degradation	0/3	0.34	0.17
3-2	CYTDt2r	cytd[e] + h[e] <==> cytd[c] + h[c]	b2406	1000	Degradation	0/3	-0.28	0.96
3-2	CYTDK2	[c]cytd + gtp --> cmp + gdp + h	b2066	1000	Degradation	0/3	-0.28	0.96
3-2	CYTD	[c]cytd + h + h2o --> nh4 + uri	b2143	1000	Degradation	0/3	-0.28	0.96
3-3	BUTt2r	but[e] + h[e] <==> but[c] + h[c]	b2223	500	Degradation	3/5	0.63	0.04
3-3	BUTCT	[c]accoa + but --> ac + btcoa	(b2221 and b2222)	500	Degradation	3/5	0.63	0.04
3-3	FAO4	[c]btcoa + fad + h2o + nad --> aacoa + fadh2 + h + nadh	(b3846 and b0221)	500	Degradation	3/5	0.63	0.04
3-4	HDCAt2	h[e] + hdca[e] --> h[c] + hdca[c]	b2344	500	Degradation	5/6	0.64	0.04
3-4	FAO2	[c]atp + (8) coa + (7) fad + (7) h2o + hdca + (7) nad --> (8) aacoa + amp + (7) fadh2 + (7) h + (7) nadh + ppi	(b3845 and b3846 and b1805 and b0221)	500	Degradation	5/6	0.64	0.04
3-4	AACPS3	[c]ACP + atp + hdca --> amp + palmACP + ppi	b2836	500	Degradation	5/6	0.64	0.04

3-5	OCBT	[c]cbp + orn <==> citr-L + h + pi	(b4254 or b0273)	56256	Biosynthesis	2/3	0.89	0.00
3-5	ARGSS	[c]asp-L + atp + citr-L --> amp + argsuc + h + ppi	b3172	56256	Biosynthesis	2/3	0.89	0.00
3-5	ARGSL	[c]argsuc <==> arg-L + fum	b3960	56256	Biosynthesis	2/3	0.89	0.00
3-6	PPPNt2r	h[e] + pppn[e] <==> h[c] + pppn[c]	b2536	500	Degradation	5/6	0.48	0.10
3-6	PPPNDO	[c]h + nadh + o2 + pppn --> cechddd + nad	(b2538 and b2539 and b2540 and b2542)	500	Degradation	5/6	0.48	0.10
3-6	DHPPD	[c]cechddd + nad --> dhpppn + h + nadh	b2541	500	Degradation	5/6	0.48	0.10
3-7	PGCD	[c]3pg + nad --> 3php + h + nadh	b2913	56256	Biosynthesis	2/3	-0.03	0.56
3-7	PSERT	[c]3php + glu-L --> akg + pser-L	b0907	56256	Biosynthesis	2/3	-0.03	0.56
3-7	PSP_L	[c]h2o + pser-L --> pi + ser-L	b4388	56256	Biosynthesis	2/3	-0.03	0.56
3-8	TTDCAt2	h[e] + ttdca[e] --> h[c] + ttdca[c]	b2344	500	Degradation	5/6	0.64	0.04
3-8	FAO1	[c]atp + (7) coa + (6) fad + (6) h2o + (6) nad + ttdca --> (7) accoa + amp + (6) fadh2 + (6) h + (6) nadh + ppi	(b3845 and b3846 and b1805 and b0221)	500	Degradation	5/6	0.64	0.04
3-8	AACPS1	[c]ACP + atp + ttdca --> amp + myrsACP + ppi	b2836	500	Degradation	5/6	0.64	0.04
3-9	GALKr	[c]atp + gal <==> adp + gal1p + h	(b0757 or b2045)	2484	Degradation	3/3	0.42	0.13
3-9	UGLT	[c]gal1p + udpg <==> g1p + udpgal	b0758	2484	Degradation	3/3	0.42	0.13
3-9	UDPG4E	[c]udpg <==> udpgal	b0759	2484	Degradation	3/3	0.42	0.13
3-10	SUCpts	pep[c] + suc[r] --> pyr[c] + suc6p[c]	(b2417 and b2415 and b2416 and b2429)	941	Degradation	3/5	0.65	0.12
3-10	FFSD	[c]h2o + suc6p --> fru + g6p		941	Degradation	3/5	0.65	0.12
3-10	XYLI2i	[c]fru --> glc-D	b3565	941	Degradation	3/5	0.65	0.12
3-11	XYLT2	h[e] + xyl-D[e] --> h[c] + xyl-D[c]	b4031	856	Degradation	3/3	0.64	0.04
3-11	XYLI1	[c]xyl-D <==> xylu-D	b3565	856	Degradation	3/3	0.64	0.04
3-11	XYLK	[c]atp + xylu-D --> adp + h + xu5p-D	b3564	856	Degradation	3/3	0.64	0.04
3-12	DKMPPD2	[c]dkmpp + (3) h2o --> 2kmb + for + (6) h + pi		13085	Other	2/2	0.33	0.32
3-12	FORt	for[e] <==> for[c]	(b0904 or b2492)	13085	Other	2/2	0.33	0.32
3-12	SUCct2b	h[c] + succ[c] --> h[e] + succ[e]	b0621	13085	Other	2/2	0.33	0.32

Fours			GPR Association	Nopt	Description	Regulon	Data-R	Data-P
4-1	GALTpts	galt[e] + pep[c] --> galt1p[c] + pyr[c]	(b2094 and b2093 and b2092 and b2415 and b2416)	756	Degradation	6/9	0.59	0.02
4-1	GLTPD	[c]galt1p + nad <==> h + nadh + tag6p-D	b2091	756	Degradation	6/9	0.59	0.02
4-1	PFK_2	[c]atp + tag6p-D --> adp + h + tagdp-D	(b1723 or b2168 or (b3132 and b3137))	756	Degradation	6/9	0.59	0.02
4-1	TGBPA	[c]tagdp-D <==> dhap + g3p	((b3132 and b3137) or (b2095 and b2096))	756	Degradation	6/9	0.59	0.02
4-2	FUCt	fuc-L[e] + h[e] <==> fuc-L[c] + h[c]	b2801	501	Degradation	4/4	0.19	0.21
4-2	FCI	[c]fuc-L <==> fcl-L	b2802	501	Degradation	4/4	0.19	0.21
4-2	FCLK	[c]atp + fcl-L --> adp + fc1p + h	b2803	501	Degradation	4/4	0.19	0.21
4-2	FCLPA	[c]fc1p <==> dhap + lald-L	(b2800 or b2738)	501	Degradation	4/4	0.19	0.21
4-3	GALCTNt2r	galctn-D[e] + h[e] <==> galctn-D[c] + h[c]	b3691	752	Degradation	2/3	0.25	0.16
4-3	GALCTND	[c]galctn-D --> 2dh3dgal + h2o	b3692	752	Degradation	2/3	0.25	0.16
4-3	DDGALK	[c]2dh3dgal + atp --> 2dh3dgal6p + adp + h	b3693	752	Degradation	2/3	0.25	0.16
4-3	DDPGALA	[c]2dh3dgal6p <==> g3p + pyr	b3692	752	Degradation	2/3	0.25	0.16
4-4	HCINNMT2r	3hcinnm[e] + h[e] <==> 3hcinnm[c] + h[c]	b0353	500	Degradation	3/4	0.44	0.06
4-4	3HCINNMH	[c]3hcinnm + h + nadh + o2 --> dhcinnm + h2o + nad	b0347	500	Degradation	3/4	0.44	0.06
4-4	DHCINDO	[c]dhcinnm + o2 --> hkntd	b0348	500	Degradation	3/4	0.44	0.06
4-4	HKNTDH	[c]h2o + hkntd --> fum + (2) h + op4en	b0349	500	Degradation	3/4	0.44	0.06
4-5	GLCURt2r	glcur[e] + h[e] <==> glcur[c] + h[c]	(b3093 or b3909)	755	Degradation	4/4	0.44	0.06
4-5	GUI1	[c]glcur <==> fruor	b3092	755	Degradation	4/4	0.44	0.06
4-5	MANAO	[c]mana + nad <==> fruor + h + nadh	b4323	755	Degradation	4/4	0.44	0.06
4-5	MNNH	[c]mana --> 2ddglcn + h2o	b4322	755	Degradation	4/4	0.44	0.06

4-6	ASPCT	[c]asp-L + cbp --> cbasp + h + pi	(b4244 and b4245)	53832	Biosynthesis	2/5	0.26	0.15
4-6	DHORTS	[c]dhor-S + h2o <==> cbasp + h	b1062	53832	Biosynthesis	2/5	0.26	0.15
4-6	OMPDC	[c]h + orot5p --> co2 + ump	b1281	53832	Biosynthesis	2/5	0.26	0.15
4-6	ORPT	[c]orot5p + ppi <==> orot + prpp	b3642	53832	Biosynthesis	2/5	0.26	0.15
4-7	ANS	[c]chor + gln-L --> anth + glu-L + h + pyr	(b1263 and b1264)	56256	Biosynthesis	3/3	0.86	0.00
4-7	ANPRT	[c]anth + prpp --> ppi + pran	b1263	56256	Biosynthesis	3/3	0.86	0.00
4-7	PRAli	[c]pran --> 2cpr5p	b1262	56256	Biosynthesis	3/3	0.86	0.00
4-7	IGPS	[c]2cpr5p + h --> 3ig3p + co2 + h2o	b1262	56256	Biosynthesis	3/3	0.86	0.00
4-8	ARBT2r	arab-L[e] + h[e] <==> arab-L[c] + h[c]	b2841	919	Degradation	4/4	0.79	0.00
4-8	ARAI	[c]arab-L <==> rbl-L	b0062	919	Degradation	4/4	0.79	0.00
4-8	RBK_L1	[c]atp + rbl-L --> adp + h + ru5p-L	b0063	919	Degradation	4/4	0.79	0.00
4-8	RBP4E	[c]ru5p-L <==> xu5p-D	(b0061 or b3583 or b4198)	919	Degradation	4/4	0.79	0.00
4-9	RMNt	h[e] + rmn[e] --> h[c] + rmn[c]	b3907	501	Degradation	4/4	0.19	0.22
4-9	RMI	[c]rmn <==> rml	b3903	501	Degradation	4/4	0.19	0.22
4-9	RMK	[c]atp + rml --> adp + h + rml1p	b3904	501	Degradation	4/4	0.19	0.22
4-9	RMPA	[c]rml1p <==> dhap + lald-L	b3902	501	Degradation	4/4	0.19	0.22
4-10	GALURt2r	galur[e] + h[e] <==> galur[c] + h[c]	b3093	756	Degradation	4/4	0.50	0.04
4-10	GUI2	[c]galur <==> tagur	b3092	756	Degradation	4/4	0.50	0.04
4-10	TAGURr	[c]altrn + nad <==> h + nadh + tagur	b1521	756	Degradation	4/4	0.50	0.04
4-10	ALTRH	[c]altrn --> 2ddgln + h2o	b3091	756	Degradation	4/4	0.50	0.04

Fives			GPR Association	Nopt	Description	Regulon	Data-R	Data-P
5-1	ACGS	[c]accoa + glu-L --> acglu + coa + h	b2818	55756	Biosynthesis	4/5	0.72	0.00
5-1	ACGK	[c]acglu + atp --> acg5p + adp	b3959	55756	Biosynthesis	4/5	0.72	0.00
5-1	AGPR	[c]acg5sa + nadp + pi <==> acg5p + h + nadph	b3958	55756	Biosynthesis	4/5	0.72	0.00
5-1	ACOTA	[c]acorn + akg <==> acg5sa + glu-L	b3359	55756	Biosynthesis	4/5	0.72	0.00
5-1	ACODA	[c]acorn + h2o --> ac + orn	b3957	55756	Biosynthesis	4/5	0.72	0.00
5-2	OBTFL	[c]2obut + coa --> for + ppcoa	(b3114 or (b0902 and b0903))	671	Degradation	2/5	0.72	0.00
5-2	MCITS	[c]h2o + oaa + ppcoa --> 2mcit + coa + h	b0333	671	Degradation	2/5	0.72	0.00
5-2	MCITD	[c]2mcit --> 2mcacn + h2o	b0334	671	Degradation	2/5	0.72	0.00
5-2	MICITD	[c]2mcacn + h2o --> micit	(b1276 or b0118)	671	Degradation	2/5	0.72	0.00
5-2	MCITL2	[c]micit <==> pyr + succ	b0331	671	Degradation	2/5	0.72	0.00
5-3	O2t	o2[e] <==> o2[c]		43671	Other	21/21	0.78	0.01
5-3	NADH6	(4.5) h[c] + nadh[c] + q8[c] --> (3.5) h[e] + nad[c] + q8h2[c]	(b2276 and b2277 and b2278 and b2279 and b2280 and b2281 and b2282 and b2283 and b2284 and b2285 and b2286 and b2287 and b2288)	43671	Other	21/21	0.78	0.01
5-3	CYTBO3	(2.5) h[c] + (0.5) o2[c] + q8h2[c] --> (2.5) h[e] + h2o[c] + q8[c]	(b0429 and b0430 and b0431 and b0432)	43671	Other	21/21	0.78	0.01
5-3	SUCD1i	[c]fad + succ --> fadh2 + fum	(b0721 and b0722 and b0723 and b0724)	43671	Other	21/21	0.78	0.01
5-3	DKMPPD	[c]dkmpp + h2o + o2 --> 2kmb + for + (2) h + pi		43671	Other	21/21	0.78	0.01

Nines			GPR Association	Nopt	Description	Regulon	Data-R	Data-P
9-1	GLUPRT	[c]gln-L + h2o + prpp --> glu-L + ppi + pram	b2312	51793	Biosynthesis	8/8	0.76	0.00
9-1	PRAGSr	[c]atp + gly + pram <==> adp + gar + h + pi	b4005	51793	Biosynthesis	8/8	0.76	0.00
9-1	GARFT	[c]10fthf + gar <==> fgam + h + thf	b2500	51793	Biosynthesis	8/8	0.76	0.00
9-1	PRFGS	[c]atp + fgam + gln-L + h2o --> adp + fpram + glu-L + h + pi	b2557	51793	Biosynthesis	8/8	0.76	0.00
9-1	PRAIS	[c]atp + fpram --> adp + air + (2) h + pi	b2499	51793	Biosynthesis	8/8	0.76	0.00
9-1	AIRC2	[c]air + atp + hco3 --> 5caiz + adp + h + pi	b0522	51793	Biosynthesis	8/8	0.76	0.00

9-1	AIRC3	[c]5aizc <==> 5caiz	b0523	51793	Biosynthesis	8/8	0.76	0.00
9-1	PRASCS	[c]5aizc + asp-L + atp <==> 25aics + adp + h + pi	b2476	51793	Biosynthesis	8/8	0.76	0.00
9-1	ADSL2r	[c]25aics <==> aicar + fum	b1131	51793	Biosynthesis	8/8	0.76	0.00
9-2	AST	[c]arg-L + succoa --> coa + h + sucarg	b1747	500	Degradation	5/9	0.43	0.00
9-2	SADH	[c](2) h + (2) h2o + sucarg --> co2 + (2) nh4 + sucorn	b1748	500	Degradation	5/9	0.43	0.00
9-2	SOTA	[c]akg + sucorn --> glu-L + sucgsa	b1745	500	Degradation	5/9	0.43	0.00
9-2	SGSAD	[c]h2o + nad + sucgsa --> (2) h + nadh + sucglu	b1746	500	Degradation	5/9	0.43	0.00
9-2	SGDS	[c]h2o + sucglu --> glu-L + succ	b1744	500	Degradation	5/9	0.43	0.00
9-2	ARGORNt7	arg-L[e] + orn[c] <==> arg-L[c] + orn[e]	b1605	500	Degradation	5/9	0.43	0.00
9-2	ARGDC	[c]arg-L + h --> agm + co2	(b2938 or b4117)	500	Degradation	5/9	0.43	0.00
9-2	AGMT	[c]agm + h2o --> ptrc + urea	b2937	500	Degradation	5/9	0.43	0.00
9-2	UREAt	urea[e] <==> urea[c]	b3927	500	Degradation	5/9	0.43	0.00