

TABLE S1: 2-MONTH LUMINAL

feature	coef	pval	qval	description	category
GOLPDLCAT.PWY	-0.2417127694	0.08617388403	0.2173051554	superpathway of glycerol degradation to 1,3-propanediol	Super-Pathways
GOLPDLCAT.PWY	-0.2417127694	0.08617388403	0.2173051554	superpathway of glycerol degradation to 1,3-propanediol	Alcohol-Degradation
P23.PWY	-0.1696159337	0.07092567432	0.186317704	reductive TCA cycle I	C1-COMPOUNDS
HOMOSER.METSYN.PWY	-0.1002579161	0.08769143883	0.2200968291	L-methionine biosynthesis I	Amino-Acid-Biosynthesis
MET.SAM.PWY	-0.09628676507	0.09189800736	0.2295186686	superpathway of S-adenosyl-L-methionine biosynthesis	Super-Pathways
PWY.5347	-0.0877745348	0.07780239477	0.199978779	superpathway of L-methionine biosynthesis (transsulfuration)	Super-Pathways
PWY.5347	-0.0877745348	0.07780239477	0.199978779	superpathway of L-methionine biosynthesis (transsulfuration)	Amino-Acid-Biosynthesis
PWY.5181	0.04332487159	0.02978705199	0.08818706779	toluene degradation III (aerobic) (via p-cresol)	AROMATIC-COMPOUNDS-DEGRADATION
PWY.5181	0.04332487159	0.02978705199	0.08818706779	toluene degradation III (aerobic) (via p-cresol)	Super-Pathways
PWY.6185	0.04362684804	0.04520969298	0.1273406352	4-methylcatechol degradation (ortho cleavage)	AROMATIC-COMPOUNDS-DEGRADATION
CRNFORCAT.PWY	0.04964005154	0.02341694094	0.07066898247	creatinine degradation I	AMINE-DEG
PWY.6944	0.05206931007	0.002833523204	0.01342613331	androstenedione degradation	Steroids-Degradation
PWY.6339	0.0542396036	0.004030040732	0.01738919703	syringate degradation	Super-Pathways
PWY.6339	0.0542396036	0.004030040732	0.01738919703	syringate degradation	AROMATIC-COMPOUNDS-DEGRADATION
METHYLGALLATE.DEGRADATION.PWY	0.0564689511	0.003739501911	0.01645267031	methylgallate degradation	AROMATIC-COMPOUNDS-DEGRADATION
GALLATE.DEGRADATION.I.PWY	0.05656847812	0.003712348129	0.01640227016	gallate degradation II	AROMATIC-COMPOUNDS-DEGRADATION
GALLATE.DEGRADATION.II.PWY	0.05656847812	0.003712348129	0.01640227016	gallate degradation I	AROMATIC-COMPOUNDS-DEGRADATION
P184.PWY	0.07060550796	0.000373150021	0.002342873818	protocatechuate degradation I (meta-cleavage pathway)	AROMATIC-COMPOUNDS-DEGRADATION
PWY.7098	0.07090143887	0.000348319907	0.002213836857	vanillin and vanillate degradation II	AROMATIC-COMPOUNDS-DEGRADATION
PWY.6338	0.07155336862	0.000388341156	0.002408427722	superpathway of vanillin and vanillate degradation	AROMATIC-COMPOUNDS-DEGRADATION
PWY.6338	0.07155336862	0.000388341156	0.002408427722	superpathway of vanillin and vanillate degradation	Super-Pathways
PWY.7097	0.07155336862	0.000388341156	0.002408427722	vanillin and vanillate degradation I	AROMATIC-COMPOUNDS-DEGRADATION
P101.PWY	0.07262945299	0.000363305913	0.002288150288	ectoine biosynthesis	Polyamine-Biosynthesis
PWY.7254	0.1137949781	0.01863060502	0.05812748765	TCA cycle VII (acetate-producers)	TCA-VARIANTS