

Table 11: Expression changes in glycolysis/gluconeogenesis for the gastric bypass study.

Alphabetized list of reactions in glycolysis/gluconeogenesis (as defined by Recon 1). Ratio is the average log₁₀ expression ratio ($n=3$) of post-/pregene expression measurements (see text for details). Negative ratios (green) indicate a decrease in expression postsurgery whereas positive ratios indicate an increase (red). Values denoted with “n/a” indicate that gene expression values were unavailable, or that expression ratios conflicted at the probe or patient levels.

Reaction	Putative function	Locus	Ratio
ACS	acetyl-CoA synthetase	65985.1	n/a
ACS	acetyl-CoA synthetase	55902.1	n/a
ACS	acetyl-CoA synthetase	55902.2	n/a
ACSm	acetyl-CoA synthetase	84532.1	n/a
ACYP	acylphosphatase	98.1	-0.16
ACYP	acylphosphatase	97.2	n/a
ACYP	acylphosphatase	112611.1	n/a
ACYP	acylphosphatase	97.1	n/a
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	125.1	0.233
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	124.1	0.233
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	126.1	0.233
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	130.1	0.32
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	131.1	n/a
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	137872.1	n/a
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	127.1	n/a
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	284273.2	n/a
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	284273.1	n/a
ALCD2if	alcohol dehydrogenase, forward rxn (ethanol -> acetaldehyde)	128.1	n/a
ALCD2yf	alcohol dehydrogenase (ethanol, NADP), forward reaction	10327.1	0.066
ALCD2yf	alcohol dehydrogenase (ethanol, NADP), forward reaction	10327.2	n/a
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	218.1	-0.247
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	8854.1	0.273
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	222.1	0.284
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	501.1	n/a
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	216.1	n/a
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	8854.3	n/a
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	8854.2	n/a

Reaction	Putative function	Locus	Ratio
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	224.1	n/a
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	223.1	n/a
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	220.1	n/a
ALDD2x	aldehyde dehydrogenase (acetaldehyde, NAD)	221.1	n/a
ALDD2xm	aldehyde dehydrogenase (acetaldehyde, NAD), mitochondrial	219.1	-0.469
ALDD2xm	aldehyde dehydrogenase (acetaldehyde, NAD), mitochondrial	217.1	-0.039
ALDD2y	aldehyde dehydrogenase (acetaldehyde, NADP)	218.1	-0.247
ALDD2y	aldehyde dehydrogenase (acetaldehyde, NADP)	8854.1	0.273
ALDD2y	aldehyde dehydrogenase (acetaldehyde, NADP)	222.1	0.284
ALDD2y	aldehyde dehydrogenase (acetaldehyde, NADP)	8854.3	n/a
ALDD2y	aldehyde dehydrogenase (acetaldehyde, NADP)	8854.2	n/a
ALDD2y	aldehyde dehydrogenase (acetaldehyde, NADP)	224.1	n/a
ALDD2y	aldehyde dehydrogenase (acetaldehyde, NADP)	223.1	n/a
ALDD2y	aldehyde dehydrogenase (acetaldehyde, NADP)	221.1	n/a
CAT2p	catalase A, peroxisomal (ethanol)	847.1	n/a
CBPPer	Carbamoyl phosphate phosphotransferase, endoplasmic reticulum	92579.1	-0.133
CBPPer	Carbamoyl phosphate phosphotransferase, endoplasmic reticulum	57818.1	n/a
CBPPer	Carbamoyl phosphate phosphotransferase, endoplasmic reticulum	2538.1	n/a
DPGase	Diphosphoglycerate phosphatase	5223.1	0.125
DPGase	Diphosphoglycerate phosphatase	5224.1	n/a
DPGase	Diphosphoglycerate phosphatase	669.2	n/a
DPGase	Diphosphoglycerate phosphatase	5224.2	n/a
DPGase	Diphosphoglycerate phosphatase	669.1	n/a
DPGM	Diphosphoglyceromutase	5223.1	0.125
DPGM	Diphosphoglyceromutase	5224.1	n/a
DPGM	Diphosphoglyceromutase	669.2	n/a
DPGM	Diphosphoglyceromutase	5224.2	n/a
DPGM	Diphosphoglyceromutase	669.1	n/a
ENO	enolase	2023.1	0.075
ENO	enolase	26237.1	0.186

Reaction	Putative function	Locus	Ratio
ENO	enolase	2027.1	n/a
ENO	enolase	2027.2	n/a
ENO	enolase	2026.1	n/a
ETOHMO	ethanol monooxygenase	1571.1	-0.258
FBA	fructose-bisphosphate aldolase	229.1	0.188
FBA	fructose-bisphosphate aldolase	226.1	n/a
FBA	fructose-bisphosphate aldolase	230.1	n/a
FBA	fructose-bisphosphate aldolase	226.2	n/a
FBA	fructose-bisphosphate aldolase	226.3	n/a
FBP	fructose-bisphosphatase	2203.1	n/a
FBP	fructose-bisphosphatase	8789.1	n/a
G3PD2m	glycerol-3-phosphate dehydrogenase (FAD), mitochondrial	2820.1	n/a
G6PPer	glucose-6-phosphate phosphatase, edoplasmic reticular	92579.1	-0.133
G6PPer	glucose-6-phosphate phosphatase, edoplasmic reticular	57818.1	n/a
G6PPer	glucose-6-phosphate phosphatase, edoplasmic reticular	2538.1	n/a
GAPD	glyceraldehyde-3-phosphate dehydrogenase	26330.1	n/a
GAPD	glyceraldehyde-3-phosphate dehydrogenase	2597.1	n/a
HEX1	hexokinase (D-glucose:ATP)	3098.4	n/a
HEX1	hexokinase (D-glucose:ATP)	2645.3	n/a
HEX1	hexokinase (D-glucose:ATP)	3098.1	n/a
HEX1	hexokinase (D-glucose:ATP)	3098.2	n/a
HEX1	hexokinase (D-glucose:ATP)	3099.1	n/a
HEX1	hexokinase (D-glucose:ATP)	2645.2	n/a
HEX1	hexokinase (D-glucose:ATP)	80201.1	n/a
HEX1	hexokinase (D-glucose:ATP)	3098.5	n/a
HEX1	hexokinase (D-glucose:ATP)	3098.3	n/a
HEX1	hexokinase (D-glucose:ATP)	2645.1	n/a
HEX1	hexokinase (D-glucose:ATP)	3101.1	n/a
LDH_L	L-lactate dehydrogenase	92483.1	-0.437
LDH_L	L-lactate dehydrogenase	3948.2	n/a
LDH_L	L-lactate dehydrogenase	160287.1	n/a
LDH_L	L-lactate dehydrogenase	3945.1	n/a
LDH_L	L-lactate dehydrogenase	3948.1	n/a
LDH_L	L-lactate dehydrogenase	3939.1	n/a
LDH_L	L-lactate dehydrogenase	55293.1	n/a
PDHm	pyruvate dehydrogenase	8050.1	-0.128
PDHm	pyruvate dehydrogenase	1738.1	-0.051
PDHm	pyruvate dehydrogenase	5160.1	-0.042
PDHm	pyruvate dehydrogenase	1737.1	n/a
PDHm	pyruvate dehydrogenase	5161.1	n/a
PDHm	pyruvate dehydrogenase	5162.1	n/a
PEPCK	Phosphoenolpyruvate carboxykinase (GTP)	5105.1	0.567
PEPCKm	Phosphoenolpyruvate carboxykinase (GTP)	5106.1	n/a

Reaction	Putative function	Locus	Ratio
PFK	phosphofructokinase	5211.1	0.163
PFK	phosphofructokinase	5213.1	n/a
PFK	phosphofructokinase	5211.2	n/a
PFK	phosphofructokinase	5214.1	n/a
PGI	glucose-6-phosphate isomerase	2821.1	n/a
PGK	phosphoglycerate kinase	5230.1	0.099
PGK	phosphoglycerate kinase	348477.1	n/a
PGK	phosphoglycerate kinase	5232.1	n/a
PGM	phosphoglycerate mutase	5223.1	0.125
PGM	phosphoglycerate mutase	5224.1	n/a
PGM	phosphoglycerate mutase	669.2	n/a
PGM	phosphoglycerate mutase	5224.2	n/a
PGM	phosphoglycerate mutase	669.1	n/a
PGMT	phosphoglucomutase	55276.1	n/a
PGMT	phosphoglucomutase	5236.1	n/a
PYK	pyruvate kinase	5315.1	0.481
PYK	pyruvate kinase	5315.2	n/a
PYK	pyruvate kinase	5313.2	n/a
PYK	pyruvate kinase	5315.3	n/a
PYK	pyruvate kinase	5313.1	n/a
PYK	pyruvate kinase	113452.1	n/a
TPI	triose-phosphate isomerase	286016.1	n/a
TPI	triose-phosphate isomerase	7167.1	n/a