

Table 13: Expression changes in pyruvate metabolism for the gastric bypass study.

Alphabetized list of reactions in pyruvate metabolism (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
ACOAHi	acetyl-CoA hydrolase	134526.1	n/a
ACTLMO	acetol monooxygenase	1571.1	-0.258
ACTNMO	acetone monooxygenase	1571.1	-0.258
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	125.1	0.233
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	124.1	0.233
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	126.1	0.233
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	130.1	0.32
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	131.1	n/a
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	137872.1	n/a
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	127.1	n/a
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	284273.2	n/a
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	284273.1	n/a
ALCD21_D	alcohol dehydrogenase (D-1,2-propanediol)	128.1	n/a
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	125.1	0.233
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	124.1	0.233
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	126.1	0.233
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	130.1	0.32
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	131.1	n/a
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	137872.1	n/a
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	127.1	n/a
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	284273.2	n/a
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	284273.1	n/a
ALCD21_L	alcohol dehydrogenase (L-1,2-propanediol)	128.1	n/a
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	125.1	0.233
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	124.1	0.233

Reaction	Putative function	Locus	Ratio
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	126.1	0.233
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	130.1	0.32
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	131.1	n/a
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	137872.1	n/a
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	127.1	n/a
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	284273.2	n/a
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	284273.1	n/a
ALCD22_D	alcohol dehydrogenase (D-lactaldehyde)	128.1	n/a
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	125.1	0.233
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	124.1	0.233
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	126.1	0.233
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	130.1	0.32
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	131.1	n/a
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	137872.1	n/a
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	127.1	n/a
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	284273.2	n/a
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	284273.1	n/a
ALCD22_L	alcohol dehydrogenase (L-lactaldehyde)	128.1	n/a
ALR2	aldose reductase (methylglyoxal)	10327.1	0.066
ALR2	aldose reductase (methylglyoxal)	231.1	n/a
ALR2	aldose reductase (methylglyoxal)	10327.2	n/a
ALR2	aldose reductase (methylglyoxal)	8574.1	n/a
ALR3	aldose reductase (acetol)	10327.1	0.066
ALR3	aldose reductase (acetol)	231.1	n/a
ALR3	aldose reductase (acetol)	10327.2	n/a
ALR3	aldose reductase (acetol)	8574.1	n/a

Reaction	Putative function	Locus	Ratio
GLYOX	hydroxyacylglutathione hydrolase	84264.1	n/a
GLYOX	hydroxyacylglutathione hydrolase	84264.2	n/a
GLYOX	hydroxyacylglutathione hydrolase	3029.1	n/a
GLYOXm	hydroxyacylglutathione hydrolase, mitochondrial	3029.1	n/a
LALDD	D-lactaldehyde dehydrogenase	9380.1	n/a
LALDO	D-Lactaldehyde:NAD+ oxidoreductase (glutathione-formylating)	128.1	n/a
LALDO2	D-Lactaldehyde:NADP+ 1-oxidoreductase	10327.1	0.066
LALDO2	D-Lactaldehyde:NADP+ 1-oxidoreductase	231.1	n/a
LALDO2	D-Lactaldehyde:NADP+ 1-oxidoreductase	10327.2	n/a
LALDO2	D-Lactaldehyde:NADP+ 1-oxidoreductase	8574.1	n/a
LALDO2x	D-Lactaldehyde:NAD+ 1-oxidoreductase	8574.1	n/a
LCADi	lactaldehyde dehydrogenase	218.1	-0.247
LCADi	lactaldehyde dehydrogenase	8854.1	0.273
LCADi	lactaldehyde dehydrogenase	222.1	0.284
LCADi	lactaldehyde dehydrogenase	501.1	n/a
LCADi	lactaldehyde dehydrogenase	216.1	n/a
LCADi	lactaldehyde dehydrogenase	8854.3	n/a
LCADi	lactaldehyde dehydrogenase	8854.2	n/a
LCADi	lactaldehyde dehydrogenase	224.1	n/a
LCADi	lactaldehyde dehydrogenase	223.1	n/a
LCADi	lactaldehyde dehydrogenase	220.1	n/a
LCADi	lactaldehyde dehydrogenase	221.1	n/a
LCADi_D	lactaldehyde dehydrogenase	218.1	-0.247
LCADi_D	lactaldehyde dehydrogenase	8854.1	0.273
LCADi_D	lactaldehyde dehydrogenase	222.1	0.284
LCADi_D	lactaldehyde dehydrogenase	501.1	n/a
LCADi_D	lactaldehyde dehydrogenase	216.1	n/a
LCADi_D	lactaldehyde dehydrogenase	8854.3	n/a
LCADi_D	lactaldehyde dehydrogenase	8854.2	n/a
LCADi_D	lactaldehyde dehydrogenase	224.1	n/a
LCADi_D	lactaldehyde dehydrogenase	223.1	n/a
LCADi_D	lactaldehyde dehydrogenase	220.1	n/a
LCADi_D	lactaldehyde dehydrogenase	221.1	n/a
LCADi_Dm	lactaldehyde dehydrogenase, mitochondrial	219.1	-0.469

Reaction	Putative function	Locus	Ratio
LCADi_Dm	lactaldehyde dehydrogenase, mitochondrial	8659.1	-0.337
LCADi_Dm	lactaldehyde dehydrogenase, mitochondrial	4329.1	-0.084
LCADi_Dm	lactaldehyde dehydrogenase, mitochondrial	217.1	-0.039
LCADi_Dm	lactaldehyde dehydrogenase, mitochondrial	5832.1	n/a
LCADi_Dm	lactaldehyde dehydrogenase, mitochondrial	8659.2	n/a
LCADi_Dm	lactaldehyde dehydrogenase, mitochondrial	7915.1	n/a
LCADi_Dm	lactaldehyde dehydrogenase, mitochondrial	7915.2	n/a
LCADim	lactaldehyde dehydrogenase, mitochondrial	219.1	-0.469
LCADim	lactaldehyde dehydrogenase, mitochondrial	8659.1	-0.337
LCADim	lactaldehyde dehydrogenase, mitochondrial	4329.1	-0.084
LCADim	lactaldehyde dehydrogenase, mitochondrial	217.1	-0.039
LCADim	lactaldehyde dehydrogenase, mitochondrial	5832.1	n/a
LCADim	lactaldehyde dehydrogenase, mitochondrial	8659.2	n/a
LCADim	lactaldehyde dehydrogenase, mitochondrial	7915.1	n/a
LCADim	lactaldehyde dehydrogenase, mitochondrial	7915.2	n/a
LDH_D	D-lactate dehydrogenase	197257.1	n/a
LDH_D	D-lactate dehydrogenase	197257.2	n/a
LDH_Lm	L-lactate dehydrogenase	3939.1	n/a
LGTHL	lactoylglutathione lyase	2739.1	n/a
L-LACDcm	L-Lactate dehydrogenase, cytosolic/mitochondrial	124637.1	n/a
ME1m	malic enzyme (NAD), mitochondrial	4200.1	n/a
ME2	malic enzyme (NADP)	4199.1	-0.208
ME2m	malic enzyme (NADP), mitochondrial	10873.1	n/a
ME2m	malic enzyme (NADP), mitochondrial	4200.1	n/a
PCm	pyruvate carboxylase	5091.1	n/a
PCm	pyruvate carboxylase	5091.2	n/a
PPDOx	Propane-1,2-diol:NAD+ 1-oxidoreductase	8574.1	n/a

Reaction	Putative function	Locus	Ratio
PPDOy	Propane-1,2-diol:NADP+ 1-oxidoreductase	10327.1	0.066
PPDOy	Propane-1,2-diol:NADP+ 1-oxidoreductase	231.1	n/a
PPDOy	Propane-1,2-diol:NADP+ 1-oxidoreductase	10327.2	n/a
PPDOy	Propane-1,2-diol:NADP+ 1-oxidoreductase	8574.1	n/a