

Table S2. Genes expressed at significantly higher levels in the flea by wild-type *Y. pseudotuberculosis* (IP strain) than by the *Y. pseudotuberculosis* mutant (IPmt strain)

Gene ID	Gene name	Predicted function of gene product	Relative expression
1 day after infection:			
YPTB0337	<i>hmuU</i>	ABC hemin transporter, permease subunit	2.7
YPTB0338	<i>hmuT</i>	ABC transporter, periplasmic hemin-binding protein	4.9
YPTB0339	<i>hmuS</i>	hemin degradation/transport protein	6.6
YPTB0557	--	cysteine desulfurase	2.5
YPTB0558	--	acyl-CoA dehydrogenase	2.1
YPTB0560	--	hypothetical protein	2.0
YPTB0668	<i>setA</i>	sugar efflux transporter	2.0
YPTB0678	<i>ygaW</i>	L-alanine exporter AlaE	2.1
YPTB1515	--	membrane protein	3.5
YPTB1884	--	MFS superfamily multidrug-efflux transporter	4.4
YPTB1885	--	ThiF family protein	5.4
YPTB1886	--	tRNA (cmo5U34)-methyltransferase 1	5.9
YPTB1887	--	hypothetical protein	4.7
YPTB1888	--	methyltransferase type 11	4.0
YPTB1889	<i>lysA</i>	diaminopimelate decarboxylase	3.3
YPTB1890	<i>yjck</i>	ribosomal-protein-alanine acetyltransferase	2.1
YPTB1935	<i>ansP</i>	APC family L-asparagine permease	2.3
YPTB2113	--	attachment invasion locus protein precursor	4.0
YPTB2239	--	XRE family transcriptional regulator	2.4
YPTB2240	--	putative phage protein	2.7
YPTB3475	--	membrane protein	3.0
YPTB3856	--	biotin carboxylase superfamily protein	2.1
YPTB3905	<i>ibpB</i>	heat shock chaperone	2.9
pYptb0034	--	hypothetical protein	3.6
pYptb0036	--	hypothetical protein	7.7
pYptb0037	<i>parA</i>	plasmid partitioning protein	2.4
pYptb0038	--	hypothetical protein	2.1
pYptb0039	--	hypothetical protein	2.2
pYptb0040	--	hypothetical protein	2.4
pYptb0041	--	hypothetical protein	4.4
14 days after infection:			
YPTB0110	<i>argC</i>	N-acetyl-gamma-glutamyl-phosphate reductase	5.0
YPTB0111	<i>argB</i>	acetylglutamate kinase	3.0
YPTB0127	--	ABC transporter, periplasmic ribose/sugar binding protein	2.5
YPTB0336	<i>hmuV</i>	hemin importer ATP-binding subunit	3.4
YPTB0337	<i>hmuU</i>	ABC hemin transporter, permease subunit	4.1
YPTB0338	<i>hmuT</i>	ABC transporter, periplasmic hemin-binding protein	6.8
YPTB0339	<i>hmuS</i>	hemin degradation/transport protein	9.5
YPTB0526	<i>argI</i>	ornithine carbamoyltransferase subunit I	2.7
YPTB0557	--	cysteine desulfurase	4.3
YPTB0558	--	acyl-CoA dehydrogenase	4.9
YPTB0559	--	hypothetical protein	6.0
YPTB0560	--	hypothetical protein	3.6

YPTB0561	--	protein involved in molybdopterin biosynthesis	4.1
YPTB0623	<i>carA</i>	carbamoyl phosphate synthase small subunit	2.5
YPTB1240	<i>adiC</i>	arginine: agmatin antiporter	2.5
YPTB1241	<i>adiA</i>	arginine decarboxylase	2.0
YPTB1377	<i>artI</i>	ABC transporter, periplasmic arginine-binding protein	2.1
YPTB1389	--	virulence factor	2.1
YPTB1423	<i>cspB</i>	cold shock-like protein	3.4
YPTB1515	--	membrane protein	2.5
YPTB1579	<i>argG</i>	argininosuccinate synthase	4.7
YPTB1884	--	MFS superfamily multidrug-efflux transporter	5.7
YPTB1885	--	ThiF family protein	6.4
YPTB1886	--	tRNA (cmo5U34)-methyltransferase 1	8.1
YPTB1887	--	hypothetical protein	8.7
YPTB1888	--	methyltransferase type 11	5.2
YPTB1889	<i>lysA</i>	diaminopimelate decarboxylase	4.0
YPTB1890	<i>yjck</i>	ribosomal-protein-alanine acetyltransferase	2.0
YPTB1935	<i>ansP</i>	APC family L-asparagine permease	2.1
YPTB2288	<i>rovA</i>	transcriptional regulator RovA	2.5
YPTB2954	<i>asr</i>	acid shock protein precursor	2.4
YPTB3460	--	adhesin/hemolysin	2.1
YPTB3461	--	hemolysin activator/exporter	2.8
YPTB3585	<i>cspa1</i>	major cold shock protein Cspa1	2.3
YPTB3795	--	HNH endonuclease domain-containing protein	2.1
YPTB3856	--	biotin carboxylase superfamily protein	2.8

Criteria: ≥ 2 -fold difference; p -value ≤ 0.05