

Table S1. Genes expressed at significantly higher levels in the flea by the *Y. pseudotuberculosis* mutant (IPmt strain) than by wild-type *Y. pseudotuberculosis* (IP strain)

Gene ID	Gene name	Predicted function of gene product	Relative expression
1 day after infection:			
YPTB0103	--	hypothetical protein	2.2
YPTB0570	<i>hmsT</i>	diguanylate cyclase, c-di-GMP synthesis	2.3
YPTB0592	<i>hmsD</i>	diguanylate cyclase, c-di-GMP synthesis	2.3
YPTB0639	--	Type VI secretion system (T6SS) locus 4 (T6SS-4) hypothetical protein	6.5
YPTB0641	--	T6SS-4 protein TssB	10.0
YPTB0643	<i>hcp</i>	T6SS-4 protein Hcp	13.1
YPTB0728	<i>panD</i>	aspartate alpha-decarboxylase	2.5
YPTB0729	<i>panC</i>	pantoate--beta-alanine ligase	2.4
YPTB0810	<i>cybC</i>	cytochrome b(562)	2.1
YPTB1108	<i>ybeJ</i>	glutamate and aspartate transporter subunit	2.0
YPTB1408	<i>pflB</i>	formate acetyltransferase 1	2.0
YPTB1923	<i>evg</i>	two-component response regulator	2.6
YPTB1937	--	glutaminase	8.9
YPTB2154	<i>mipB</i>	fructose-6-phosphate aldolase	2.2
YPTB2334	--	hypothetical protein	2.5
YPTB2934	<i>kch</i>	voltage-gated potassium channel	2.0
YPTB3107	--	YaeF/YiiX family of permuted papain-like enzymes	2.2
YPTB3361	--	fimbrial protein	2.3
YPTB3362	--	fimbrial chaperone protein	2.5
YPTB3584	<i>pcp</i>	outer membrane lipoprotein	3.4
14 days after infection:			
YPTB0092	--	hypothetical protein	2.4
YPTB0094	--	putative exported protein	5.4
YPTB0103	--	hypothetical protein	3.5
YPTB0160	--	fimbrial protein	3.1
YPTB0542	<i>frwD</i>	fructose-like phosphotransferase EIIB subunit 3	2.2
YPTB0544	<i>frwC</i>	fructose-like permease EIIC subunit 2	2.1
YPTB0639	--	Type VI secretion system locus 4 (T6SS-4) protein	8.1
YPTB0640	--	T6SS-4 ImpA domain protein TssC	8.8
YPTB0641	--	T6SS-4 protein TssB	9.3
YPTB0642	--	T6SS-4 EvpB family protein ImpC	6.6
YPTB0643	<i>hcp</i>	T6SS-4 protein Hcp	6.1
YPTB0644	--	T6SS-4 lysozyme-like protein ImpF	4.5
YPTB0645	--	T6SS-4 protein TssF	5.9
YPTB0646	--	T6SS-4 protein TssG	6.2
YPTB0647	<i>clpB</i>	T6SS-4 ATP-dependent protease ClpB	8.1
YPTB0648	--	T6SS-4 protein VgrG	5.4
YPTB0649	--	T6SS-4 pentapeptide-4 family protein	7.4
YPTB0650	--	T6SS-4 pentapeptide-4 family protein	7.6
YPTB0651	--	T6SS-4 protein, TagC family	9.7

YPTB0652	--	T6SS-4 PAAR family protein	3.9
YPTB0654	--	T6SS-4 protein Impl	2.5
YPTB0656	--	T6SS-4 membrane protein lcmF	2.4
YPTB0657	--	T6SS-4 hypothetical protein	4.5
YPTB0728	<i>panD</i>	aspartate alpha-decarboxylase	2.5
YPTB0730	<i>panB</i>	3-methyl-2-oxobutanoate hydroxymethyltransferase	2.1
YPTB0781	--	short chain dehydrogenase	2.0
YPTB0805	<i>dmsA</i>	dimethyl sulfoxide reductase subunit A	2.2
YPTB1081	--	hypothetical protein	2.0
YPTB1107	<i>gltJ</i>	ABC glutamate/aspartate transporter, permease subunit	2.2
YPTB1108	<i>ybeJ</i>	glutamate and aspartate transporter subunit	2.5
YPTB1247	--	porin	2.1
YPTB1522	<i>mglB</i>	ABC transporter, periplasmic galactose-binding protein	2.1
YPTB1923	<i>evg</i>	two-component response regulator	3.2
YPTB1934	--	aminotransferase	2.0
YPTB1937	--	glutaminase	4.8
YPTB1938	--	MFS superfamily multidrug efflux transporter	2.3
YPTB1959	<i>argD</i>	succinylornithine /acetylornithine transaminase	2.2
YPTB1964	<i>ompC2</i>	outer membrane protein C2, porin	4.4
YPTB2279	--	membrane protein	3.1
YPTB2334	--	hypothetical protein	2.6
YPTB2352	--	hypothetical protein	2.3
YPTB2374	--	fimbrial protein	2.0
YPTB2393	--	hypothetical protein	2.9
YPTB2394	--	surface protein	6.3
YPTB2548	<i>glnH</i>	glutamine ABC transporter periplasmic protein	2.8
YPTB2588	<i>rovM</i>	LysR family transcriptional regulator	3.2
YPTB2610	<i>hisJ</i>	ABC transporter, periplasmic histidine-binding protein	2.2
YPTB3031	--	prepilin-type cleavage/methylation domain-containing protein	2.1
YPTB3107	--	YaeF/YiiX family of permuted papain-like enzymes	2.5
YPTB3361	--	fimbrial protein	2.4
YPTB3534	--	Plil-like periplasmic lysozyme inhibitor	2.3
YPTB3582	--	2-hydroxy-3-oxopropionate reductase	2.2
YPTB3584	<i>pcp</i>	outer membrane lipoprotein	3.5
YPTB3637	--	T6SS locus 1 (T6SS-1) protein	3.2
YPTB3638	--	T6SS-1 protein	2.1
YPTB3639	--	T6SS-1 hypothetical protein	3.0
YPTB3736	--	Lacl family transcriptional regulator	2.1
YPTB3896	--	fimbrial protein	5.0

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