

Table 4. Gene expression variations greater than 1.8-fold comparing *in vitro* 37°C, pH 6.8 (fed tick) to dialysis membrane chambers

TIGR gene no. and annotation	Fold change	Uncertainty	Gene function	Paralogous family
BBA66 antigen, P35, putative	-31.02	0.43	Cell Envelope/Biosynthesis and degradation of surface polysaccharide	54
BBK32 immunogenic protein P35	-19.31	0.42	Cell Envelope/Biosynthesis and degradation of surface polysaccharide	---
BBA65 hypothetical protein	-18.22	0.43		54
BBA25 decorin binding protein B (dbpB)	-18.11	0.47	Cell Envelope/Other	74
BBA16 outer surface protein B (ospB)	-16.01	0.43	Cell Envelope/Other	53
BBA24 decorin binding protein A (dbpA)	-14.77	0.42	Cell Envelope/Other	74
BBA34 oligopeptide ABC transporter, periplasmic oligopeptide-binding protein (oppAV)	-10.57	0.44	Transport and binding proteins/Aminoacids, peptides and amines	37
BBA07 chpAI protein, putative	-9.05	0.44	Regulatory Functions/Other	---
BBA15 outer surface protein A (ospA)	-8.86	0.42	Cell Envelope/Other	53
BBK17 adenine deaminase (adeC)	-7.58	0.39	Purines, Pyrimidines, Nucleosides, and Nucleotides/Salvage of nucleosides and nucleotides	61
BBA05 antigen, S1	-7.04	0.39	Cell Envelope/Biosynthesis and degradation of surface polysaccharide	---
BBA36 lipoprotein	-6.33	0.41	Cell Envelope/Other	---
BBA74 outer membrane porin (oms28)	-6.07	0.4	Transport and binding proteins/Porins	171
BBA64 antigen, P35	-6.04	0.41	Cell Envelope/Biosynthesis and degradation of surface polysaccharide	54
BBC05 conserved hypothetical protein	-5.87	0.4		161
BBM28 lipoprotein (mlpF)	-5.77	0.43	Cell Envelope/Other	113
BBK07 hypothetical protein	-5.67	0.43		59
BBJ08 hypothetical protein	-5.48	0.4		12
BBQ03 outer membrane protein, putative	-5.41	0.41	Cell Envelope/Other	52
BB0323 hypothetical protein	-5.4	0.39		---
BBB29 PTS system, maltose and glucose-specific IIBC component (malX)	-5.01	0.44	Transport and binding proteins/Carbohydrates, organic alcohols, and acids	16
BBI42 outer membrane protein, putative	-4.81	0.45	Cell Envelope/Other	52
BB0563 hypothetical protein	-4.81	0.4		35
BB0631 hypothetical protein	-4.31	0.42		---
BB0681 methyl-accepting chemotaxis protein	-4.14	0.4	Cellular Processes/Chemotaxis and motility	13

TIGR gene no. and annotation	Fold change	Uncertainty	Gene function	Paralogous family
(mcp-5)				
BBA04 antigen, S2	-4.08	0.4	Cell Envelope/Biosynthesis and degradation of surface polysaccharide	44
BBK12 hypothetical protein	-4.07	0.39		59
BB0629 PTS system, fructose-specific IIABC component (fruA-2)	-4.07	0.36	Transport and binding proteins/Carbohydrates, organic alcohols, and acids	19
BBK47 hypothetical protein	-4.05	0.4		69
BB0680 methyl-accepting chemotaxis protein (mcp-4)	-3.83	0.39	Cellular Processes/Chemotaxis and motility	13
BB0678 ribose/galactose ABC transporter, permease protein (rbsC-1)	-3.78	0.43	Transport and binding proteins/Carbohydrates, organic alcohols, and acids	130
BB0238 hypothetical protein	-3.76	0.39		---
BB0729 glutamate transporter (gltP)	-3.71	0.46	Transport and binding proteins/Amino acids, peptides and amines	---
BB0329 oligopeptide ABC transporter, periplasmic oligopeptide-binding protein (oppA-2)	-3.63	0.42	Transport and binding proteins/Amino acids, peptides and amines	37
BBA67 hypothetical protein	-3.62	0.36		---
BBC12 conserved hypothetical protein	-3.56	0.4		165
BB0558 phosphoenolpyruvate-protein phosphatase (ptsI)	-3.49	0.41	Transport and binding proteins/Carbohydrates, organic alcohols, and acids	---
BBA62 lipoprotein	-3.49	0.37	Cell Envelope/Other	---
BB0603 membrane-associated protein p66	-3.48	0.42	Cell Envelope/Other	---
BB0366 aminopeptidase I (yscI)	-3.37	0.38	Protein Fate/Degradation of proteins, peptides, and glycopeptides	131
BB0144 glycine betaine, L-proline ABC transporter, glycine/betaine/L-proline-binding protein (proX)	-3.1	0.37	Transport and binding proteins/Amino acids, peptides and amines	---
BB0299 cell division protein (ftsZ)	-3.09	0.41	Cellular Processes/Cell division	---
BB0418 hypothetical protein	-3.04	0.36		---
BBA73 antigen, P35, putative	-3	0.43	Cell Envelope/Biosynthesis and degradation of surface polysaccharide	54
BB0694 signal recognition particle protein (ffh)	-2.99	0.4	Protein Fate/Protein and peptide secretion and trafficking	10
BB0056 phosphoglycerate kinase (pgk)	-2.93	0.36	Energy Metabolism/Glycolysis & gluconeogenesis	---
BBJ09 outer surface protein D (ospD)	-2.88	0.38	Cell Envelope/Other	---
BB0057 glyceraldehyde 3-phosphate dehydrogenase (gap)	-2.87	0.4	Energy Metabolism/Glycolysis & gluconeogenesis	---
BBR29 conserved hypothetical protein	-2.85	0.38		161

TIGR gene no. and annotation	Fold change	Uncertainty	Gene function	Paralogous family
BB0786 general stress protein (ctc)	-2.85	0.38	Cellular Processes/Cell division	---
BBK45 immunogenic protein P37, putative	-2.75	0.35	Cell Envelope/Biosynthesis and degradation of surface polysaccharides	75
BBK48 immunogenic protein P37, putative	-2.68	0.38	Cell Envelope/Biosynthesis and degradation of surface polysaccharides	75
BBP28 lipoprotein	-2.67	0.41	Cell Envelope/Other	113
BB0668 flagellar filament outer layer protein (flaA)	-2.66	0.39	Cellular Processes/Chemotaxis and motility	---
BBK13 conserved hypothetical protein	-2.63	0.37		40
BB0691 translation elongation factor G (fus-2)	-2.58	0.39	Protein Synthesis/Translation factors	11
BB0588 5'-methylthioadenosine/S-adenosylhomocysteine nucleosidase, putative (pfs-2)	-2.47	0.39	Purines, Pyrimidines, Nucleosides, and Nucleotides/Salvage of nucleosides and nucleotides	26
BB0789 cell division protein (ftsH)	-2.43	0.38	Cellular Processes/Cell division	---
BB0241 glycerol kinase (glpK)	-2.43	0.38	Energy Metabolism/Other	---
BBJ34 hypothetical protein	-2.3	0.38		92

BBS25 conserved hypothetical protein	2.82	0.41		112
BBH13 conserved hypothetical protein	2.83	0.39		80
BBE16 hypothetical protein	2.9	0.51		99
BBF33 surface antigen lipoprotein at right end of lp28-1 (vlsE)"	2.99	0.41		---
BBF03 conserved hypothetical protein	3.34	0.39		170
BBJ51 vlsE1 protein, authentic frameshift (vlsE1)	4.3	0.44	Cell Envelope/Other	80
				170