

Gene ID	Gene Name Gene Symbol	PANTHER Family /Subfamily	PANTHER Protein Class
Up-regulated Genes			
PA3641 UniProtKB=Q9HXZ0	Probable amino acid permease PA3641	SUBFAMILY NOT NAMED (PTHR30330:SF1)	-
PA0281 UniProtKB=Q9I6K9	Sulfate transport protein CysW <i>cysW</i>	Sulfate transport system permease protein CysW (PTHR30406:SF1)	-
PA4850 UniProtKB=Q9HUW3	Ribosomal protein L11 methyltransferase <i>prmA</i>	Electron transfer flavoprotein beta subunit lysine methyltransferase (PTHR43648:SF1)	DNA methyltransferase RNA methyltransferase
PA5174 UniProtKB=Q9HU15	Beta-ketoacyl-[acyl-carrier-protein] synthase FabY <i>fabY</i>	3-oxoacyl-[acyl-carrier-protein] synthase 1 (PTHR11712:SF306)	acyltransferase dehydrogenase esterase ligase methyltransferase
PA1708 UniProtKB=Q9I324	Translocator protein PopB <i>popB</i>	-	-
PA1709 UniProtKB=Q9I323	Translocator outer membrane protein PopD <i>popD</i>	-	-
PA1707 UniProtKB=Q9I325	Regulatory protein PcrH <i>pcrH</i>	-	-
PA1710 UniProtKB=P26995	Exoenzyme S synthesis protein C <i>exsC</i>	-	-
PA0547 UniProtKB=Q9I5Y9	Probable transcriptional regulator PA0547	-	-
PA1228 UniProtKB=Q9I4B0	Uncharacterized protein PA1228	-	-
PA0282 UniProtKB=Q9I6K8	Sulfate transport protein CysT <i>cysT</i>	Sulfate transport system permease protein CysT (PTHR30406:SF8)	-
PA1714 UniProtKB=Q9I321	ExsD <i>exsD</i>	-	-
PA1701 UniProtKB=G3XD37	Uncharacterized protein PA1701	-	-
PA2749 UniProtKB=Q9I094	DNA-specific endonuclease I <i>endA</i>	Endonuclease-1 (PTHR33607:SF2)	-
PA1719 UniProtKB=P95434	Type III export protein PscF <i>pscF</i>	-	-
PA4412 UniProtKB=Q9HW01	UDP-N-acetylglucosamine--N-acetylmuramyl-(pentapeptide) pyrophosphoryl-undecaprenol N-acetylglucosamine transferase <i>murG</i>	Glycosyltransferase (PTHR21015:SF22)	acetyltransferase glycosyltransferase transfer/carrier protein
PA3814 UniProtKB=Q9HXI8	Cysteine desulfurase IscS <i>iscS</i>	Selenocysteine lyase (PTHR11601:SF52)	lyase
PA1695 UniProtKB=	Translocation protein in type III	-	-

Q9I332	secretion <i>pscP</i>		
PA2252 UniProtKB=Q9I1L7	Probable AGCS sodium/alanine/glycine symporter PA2252	SUBFAMILY NOT NAMED (PTHR30330:SF1)	-
PA4043 UniProtKB=Q9HWY4	Geranyltranstransferase <i>ispA</i>	Geranylgeranyl pyrophosphate synthase 10, mitochondrial-related (PTHR43281:SF1)	acyltransferase
PA5429 UniProtKB=Q9HTD7	Aspartate ammonia-lyase <i>aspA</i>	Aspartate ammonia-lyase (PTHR42696:SF2)	lyase
PA1057 UniProtKB=Q9I4R7	Uncharacterized protein PA1057	SUBFAMILY NOT NAMED (PTHR34584:SF1)	-
PA1319 UniProtKB=Q9I425	Cytochrome bo(3) ubiquinol oxidase subunit 3 <i>cyoC</i>	Cytochrome bo(3) ubiquinol oxidase subunit 3 (PTHR11403:SF2)	oxidase
PA3182 UniProtKB=Q9X2N2	6-phosphogluconolactonase <i>pgl</i>	6-phosphogluconolactonase (PTHR11054:SF0)	hydrolase
PA3815 UniProtKB=Q9HXI7	IscR <i>iscR</i>	HTH-type transcriptional regulator IscR (PTHR33221:SF10)	-
PA3841 UniProtKB=G3XDA1	Exoenzyme S <i>exoS</i>	SUBFAMILY NOT NAMED (PTHR10339:SF30)	-
PA2757 UniProtKB=Q9I086	Uncharacterized protein PA2757	-	-
PA3019 UniProtKB=Q9HZI7	Probable ATP-binding component of ABC transporter PA3019	ABC transporter ATP-binding protein uup (PTHR19211:SF69)	-
PA2991 UniProtKB=P57112	Soluble pyridine nucleotide transhydrogenase <i>sthA</i>	Soluble pyridine nucleotide transhydrogenase (PTHR22912:SF93)	dehydrogenase oxidase reductase
PA1838 UniProtKB=Q9I2Q7	Sulfite reductase <i>cysI</i>	Sulfite reductase [NADPH] subunit beta (PTHR11493:SF47)	-
PA3809 UniProtKB=Q51383	2Fe-2S ferredoxin <i>fdx</i>	2Fe-2S ferredoxin (PTHR23426:SF34)	-
PA3131 UniProtKB=Q9HZ93	Probable aldolase PA3131	KHG/KDPG aldolase (PTHR30246:SF0)	aldolase
PA2662 UniProtKB=Q9I0H6	Uncharacterized protein PA2662	-	-
PA1699 UniProtKB=G3XCT8	Uncharacterized protein PA1699	-	-
PA1700 UniProtKB=Q9I329	Uncharacterized protein PA1700	-	-
PA2998 UniProtKB=Q9HZK7	Na(+)-translocating NADH-quinone reductase subunit B <i>nqrB</i>	SUBFAMILY NOT NAMED (PTHR30578:SF1)	-
PA0044 UniProtKB=Q9I788	Exoenzyme T <i>exoT</i>	SUBFAMILY NOT NAMED	-

		(PTHR10339:SF30)	
PA4442 UniProtKB=O50274	Bifunctional enzyme CysN/CysC <i>cysNC</i>	Elongation factor 1-alpha 1-related (PTHR23115:SF170)	G-protein hydrolase translation elongation factor translation initiation factor
PA5012 UniProtKB=G3XD35	Heptosyltransferase II <i>waaF</i>	ADP-heptose--LPS heptosyltransferase 2 (PTHR30160:SF7)	carbohydrate kinase glycosyltransferase
PA2204 UniProtKB=Q9I1R3	Probable binding protein component of ABC transporter PA2204	-	-
PA1318 UniProtKB=Q9I426	Cytochrome bo(3) ubiquinol oxidase subunit 1 <i>cyoB</i>	Cytochrome bo(3) ubiquinol oxidase subunit 1 (PTHR10422:SF35)	oxidase
PA3811 UniProtKB=Q9HXJ1	Co-chaperone protein HscB homolog <i>hscB</i>	Co-chaperone protein HscB (PTHR14021:SF16)	-
PA4002 UniProtKB=G3XD88	Rod shape-determining protein <i>rodA</i>	Rod shape-determining protein RodA (PTHR30474:SF1)	-
PA0915 UniProtKB=Q9I542	Uncharacterized protein PA0915	SUBFAMILY NOT NAMED (PTHR37805:SF1)	-
PA0284 UniProtKB=Q9I6K6	Uncharacterized protein PA0284	-	-
PA1706 UniProtKB=G3XD49	Type III secretion protein PcrV <i>pcrV</i>	-	-
PA1712 UniProtKB=P26994	Exoenzyme S synthesis protein B <i>exsB</i>	-	-
PA4627 UniProtKB=Q9HVG4	Ribosomal RNA small subunit methyltransferase C <i>rsmC</i>	Ribosomal RNA small subunit methyltransferase C (PTHR18895:SF70)	DNA methyltransferase RNA methyltransferase
PA0789 UniProtKB=Q9I5E9	Probable amino acid permease PA0789	SUBFAMILY NOT NAMED (PTHR43341:SF2)	-
PA1717 UniProtKB=Q9I318	Type III export protein PscD <i>pscD</i>	-	-
PA5530 UniProtKB=Q9HT43	Probable MFS dicarboxylate transporter PA5530	SUBFAMILY NOT NAMED (PTHR43528:SF5)	-
PA1696 UniProtKB=Q9I331	Translocation protein in type III secretion <i>pscO</i>	-	-
PA3743 UniProtKB=Q9HXQ1	tRNA (guanine-N(1))-methyltransferase <i>trmD</i>	tRNA (guanine-N(1))-methyltransferase (PTHR32125:SF1)	-
PA1723 UniProtKB=Q9I314	Type III export protein PscJ <i>pscJ</i>	SUBFAMILY NOT NAMED (PTHR30046:SF2)	-

PA3195 UniProtKB=P27726	Glyceraldehyde-3-phosphate dehydrogenase <i>gap</i>	glyceraldehyde-3-phosphate dehydrogenase C-related (PTHR43148:SF2)	dehydrogenase
PA4390 UniProtKB=Q9HW14	Uncharacterized protein PA4390	-	-
PA1697 UniProtKB=Q9I330	ATP synthase in type III secretion system PA1697	SUBFAMILY NOT NAMED (PTHR15184:SF48)	ATP synthase DNA binding protein anion channel hydrolase ligand-gated ion channel
PA0654 UniProtKB=Q9I5R7	S-adenosylmethionine decarboxylase proenzyme <i>speD</i>	S-adenosylmethionine decarboxylase proenzyme (PTHR33866:SF1)	-
PA4443 UniProtKB=O50273	Sulfate adenylyltransferase subunit 2 <i>cysD</i>	Sulfate adenylyltransferase subunit 2 (PTHR43196:SF1)	nucleotidyltransferase
PA3068 UniProtKB=Q9HZE0	NAD-specific glutamate dehydrogenase <i>gdhB</i>	SUBFAMILY NOT NAMED (PTHR43403:SF1)	dehydrogenase
PA0570 UniProtKB=Q9I5W6	Uncharacterized protein PA0570	-	-

Down-regulated genes

PA1557 UniProtKB=Q9I3G0	Cytochrome c oxidase, cbb3-type, CcoN subunit <i>ccoN2</i>	SUBFAMILY NOT NAMED (PTHR10422:SF29)	oxidase
PA1555 UniProtKB=Q9I3G2	Cbb3-type cytochrome c oxidase subunit <i>ccop2</i>	SUBFAMILY NOT NAMED (PTHR33751:SF1)	-
PA3531 UniProtKB=Q9HY79	Ferroxidase <i>bfrB</i>	Bacterioferritin (PTHR30295:SF0)	storage protein
PA5446 UniProtKB=Q9HTC1	Uncharacterized protein PA5446	-	-
PA4752 UniProtKB=P95454	Ribosomal RNA large subunit methyltransferase E <i>rlmE</i>	rRNA methyltransferase 2, mitochondrial (PTHR10920:SF18)	-
PA0310 UniProtKB=Q9I6I1	Uncharacterized protein PA0310	SUBFAMILY NOT NAMED (PTHR12907:SF22)	-
PA3572 UniProtKB=Q9HY48	Uncharacterized protein PA3572	-	-
PA4611 UniProtKB=Q9HVH9	Uncharacterized protein PA4611	-	-
PA0905 UniProtKB=O69078	Carbon storage regulator homolog <i>csrA</i>	Carbon storage regulator (PTHR34984:SF1)	-
PA4067 UniProtKB=Q9HWW1	Outer membrane protein OprG <i>oprG</i>	Outer membrane protein W (PTHR36920:SF1)	-
PA1556 UniProtKB=Q9I3G1	Cytochrome c oxidase, cbb3-type, CcoO subunit <i>ccoo2</i> ortholog	-	-
PA5054 UniProtKB=	ATP-dependent protease ATPase	ATP-dependent protease	chaperone

Q9HUC5	subunit HslU hslU ortholog	ATPase subunit HslU (PTHR43815:SF1)	
PA1551 UniProtKB= Q9I3G6	Probable ferredoxin PA1551 ortholog	SUBFAMILY NOT NAMED (PTHR24960:SF45)	-
PA2501 UniProtKB= Q9I0Y1	Uncharacterized protein PA2501 ortholog	-	-
PA1209 UniProtKB= Q9I4C9	Uncharacterized protein PA1209 ortholog	SUBFAMILY NOT NAMED (PTHR42709:SF7)	-
PA4761 UniProtKB= Q9HV43	Chaperone protein DnaK dnaK ortholog	Stress-70 protein, mitochondrial (PTHR19375:SF184)	-
PA4517 UniProtKB= Q9HVQ5	Uncharacterized protein PA4517 ortholog	Phosphoethanolamine transferase EptC (PTHR30443:SF2)	-