

## Matching the proteome to the genome

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**Supplementary Table 4. Clustering of genes (in blue/light blue) encoding putative *P. chrysogenum* PTS1 and PTS2 proteins**

ORF code	Description of putative <i>P. chrysogenum</i> ORF	Putative	Putative
		PTS1	PTS2
Pc06g01160	Putative 4-coumarate-CoA ligase	qTKI*	
Pc06g01180	Putative acyl-CoA dehydrogenase	sAKI*	
Pc06g01220	Putative lipase / hydrolase	qSNL*	
Pc06g01600	Putative FAD-dependent L-sorbose dehydrogenase / GMC oxidoreductase	yPRI*	
Pc12g01170	Putative enoyl-CoA hydratase/isomerase family protein	kAKL*	
Pc12g05400	Citrate synthase CitA	gAKL*	
Pc12g05520	Long-chain-fatty-acid-CoA ligase Faa2	kAKL*	
Pc12g08530	Putative long-chain acyl-CoA dehydrogenase	nAKI*	
Pc12g09740	Putative fructosyl amine oxidase	qAKL*	
Pc12g09950	Alcohol oxidase Aox	ISRL*	
Pc12g11190	Argininosuccinate synthase Arg1	gERL*	
Pc12g11930	2-methylcitrate dehydratase, involved in propionate catabolism	kARF*	
Pc12g13290	Putative flavocytochrome b2 protein / FMN-dependent dehydrogenase	sVKL*	
Pc12g13480	Putative glycine/D-amino acid oxidase	nSKL*	
Pc12g13740	Catalase/oxidase KatG	rPRL*	
Pc12g14280	Putative flavocytochrome b2 protein / FMN-dependent dehydrogenase	kPKL*	
Pc12g14790	Putative enoyl-CoA hydratase/isomerase family protein	kAKL*	
Pc13g01380	Putative fructosyl amine oxidase	ISKL*	
Pc13g01530	Putative aldo/keto reductase	dCKI*	
Pc13g01890	Putative acyl-CoA synthetase		6 / sRLsgllgHF
Pc13g02660	Protein with Cupin barrel domain	kAKL*	
Pc13g02710	Putative beta-oxidation protein/dehydratase	kSKL*	
Pc13g02990	Protein phosphatase 2C Ptc5	kSKL*	
Pc13g03350	Putative copper amine oxidase	cCRL*	
Pc13g03610	Putative YcaC-related amidohydrolase	fSKI*	
Pc13g04270	Dimethylglycine oxidase	mSRL*	
Pc13g04370	Intraperoxisomal peroxin Pex8	eSKL*	
Pc13g04510	NADP-dependent malate dehydrogenase MaeA	nAKL*	
Pc13g05130	Putative acyl-CoA synthetase	kSKL*	
Pc13g05220	Putative cytochrome b5	aAKL*	
Pc13g05940	Trifunctional enzyme Fox-2	kAKL*	
Pc13g06300	Putative amidase	hSKI*	

Pc13g06370	Protein weakly similar to ethanolamine utilization protein	kAKL*
Pc13g07430	Putative dioxygenase	aSKL*
Pc13g08330	3-dehydroshikimate dehydratase Qa-4	qHRL*
Pc13g09070	Putative esterase with alpha/beta hydrolase fold	tARL*
Pc13g09740	Fructosyl peptide oxidase FpoxE	dAKL*
Pc13g10320	Putative short chain dehydrogenase	5 / dRLtqvneHL
Pc13g11580	Putative epoxide hydrolase	kARL*
Pc13g11930	Putative very-long-chain acyl-CoA dehydrogenase	sSKL*
Pc13g12080	Putative protein with alpha/beta hydrolase fold	aARL*
Pc13g12270	Putative 4-coumarate-CoA ligase	tAKL*
Pc13g12580	Putative aminotransferase	kARL*
Pc13g12930	Putative 3-ketoacyl-CoA thiolase	4 / dRLsslIsHL
<a href="#">Pc13g14410</a>	Putative palmitoyl-CoA oxidase	ISKL*
<a href="#">Pc13g14420</a>	Putative acyl-CoA synthetase	kARL*
<a href="#">Pc13g14430</a>	Putative enoyl-CoA hydratase/isomerase family protein	kVKI*
Pc13g14580	Putative thioesterase	tAKL*
Pc13g15840	Putative enoyl-CoA hydratase/isomerase family protein	fEKL*
Pc13g15940	Putative copper amine oxidase	kSHI*
Pc14g00140	Putative acyl-CoA dehydrogenase	kARI*
Pc14g00560	Conserved hypothetical protein	rAKL*
Pc14g00970	Putative D-amino-acid oxidase	pSKL*
Pc14g01040	Putative aldehyde dehydrogenase	nARL*
Pc14g01270	Putative fumarylacetoacetate hydrolase family protein	sSKL*
<a href="#">Pc15g00410</a>	Putative 3-ketoacyl-CoA thiolase	6 / qRLnsvanQL
<a href="#">Pc15g00420</a>	Putative bifunctional fatty acid transporter/acyl-CoA synthetase	kAKI*
Pc15g01190	Putative catechol dioxygenase	qGKL*
Pc16g02530	Protein with pentatricopeptide repeat	kPKM*
Pc16g03860	Acetylase / siderophore biosynthesis protein Sid3	sLKL*
Pc16g05060	3-hydroxy-3-methylglutaryl coenzyme A reductase	aSKI*
<a href="#">Pc16g07060</a>	Putative catalase	sSRL*
<a href="#">Pc16g07070</a>	Formate oxidase Fod1	sSKL*
<a href="#">Pc16g07560</a>	Putative long chain acyl-CoA dehydrogenase	gMKL*
<a href="#">Pc16g07600</a>	Putative FAD dependent oxidoreductase	rANL*
Pc16g08670	C-8 sterol isomerase Erg-1	qLKL*
Pc16g10070	Putative 2-nitropropane dioxygenase family oxidoreductase	vSKL*
Pc16g11200	Putative copper amine oxidase	qVKL*

Pc16g11790	Putative fructosyl amine oxidase	gSKI*
Pc16g11910	Putative FAD dependent oxidoreductase	gSKL*
Pc16g14230	Putative NADPH-dependent beta-ketoacyl reductase	kGRL*
Pc16g14240	Putative amidase	sAKL*
Pc17g00720	Conserved hypothetical protein	eARL*
Pc18g01220	Fructose-bisphosphate aldolase Fba1	aGQL*
Pc18g01590	Putative glycolate oxidase-like protein / FMN-dependent dehydrogenase	IARL*
Pc18g01860	Putative D-amino-acid oxidase	qSHL*
Pc18g02760	Putative aldehyde dehydrogenase	gTKL*
Pc18g03000	Aldose 1-epimerase	kSRL*
Pc18g03220	Putative FAD-dependent oxidoreductase	tIKL*
Pc18g03470	Lysine aminopeptidase ApsA	qSKL*
Pc18g05540	Putative alcohol dehydrogenase, class IV	IANL*
Pc18g05710	Putative long-chain fatty acid transporter /acyl CoA synthetase	qVRL*
Pc20g01800	Putative palmitoyl-CoA oxidase	kSKL*
Pc20g01980	Putative 2-polyprenyl-6-methoxyphenol hydroxylase	gSRL*
Pc20g03330	Glucose-6-phosphate 1-dehydrogenase GsdA	pNRL*
Pc20g03610	NADP-dependent isocitrate dehydrogenase lcdA	kARL*
Pc20g04300	Putative flavin-containing monooxygenase	tARL*
Pc20g06660	Putative D-amino-acid oxidase	kSRL*
Pc20g08300	Conserved hypothetical protein	eSKI*
Pc20g09430	Ureidoglycolate hydrolase Dal3	pAKL*
Pc20g09660	Putative toxin biosynthesis protein / hydrolase	kSRF*
Pc20g09670	Putative phosphotransferase	yYKL*
Pc20g10430	D-mandelate dehydrogenase	gSKL*
Pc20g10700	Putative sarcosine oxidase / FAD-dependent oxidoreductase	sSKI*
Pc20g10840	Putative long-chain-fatty-acid-CoA ligase	aGKL*
Pc20g12470	Delta3-cis-delta2-trans-enoyl-CoA isomerase Eci1	rHKL*
Pc20g13410	Putative aminotransferase	aWKL*
Pc20g13500	Isopenicillin N-CoA synthetase	sVRL*
Pc20g13550	Malate synthase AcuE	aAKL*
Pc20g13690	Putative CoA-binding protein	sQRL*
Pc20g14920	Putative FAD dependent oxidoreductase	qARL*
Pc20g15010	Carnitine O-acetyltransferase	kPKL*
Pc20g15250	Putative dehydrogenase	kAQL*
Pc20g15650	Putative acetyl-CoA acetyltransferase, partial	tARL*

Pc20g15660	Putative sterol carrier protein-2	kARI*
Pc20g15670	Glutathione-dependent formaldehyde-activating enzyme	fANL*
Pc21g00970	Woronin body protein Hex1	gSRL*
Pc21g01650	Putative thioesterase	eAKL*
Pc21g02970	Putative 2-polyprenyl-6-methoxyphenol hydroxylase	qSRL*
Pc21g03400	Triose-phosphate-isomerase TpiA	nARI*
Pc21g04910	Conserved hypothetical protein	mEKL*
Pc21g05490	Dihydroxyacetone phosphate acyltransferase	eAKL*
Pc21g05590	Putative D-amino-acid oxidase	rAKL*
Pc21g06860	Peroxisomal Lon protease	eSRL*
Pc21g07210	Conserved hypothetical protein	rSKL*
Pc21g07490	Putative OHCU decarboxylase involved in purine catabolism	qSRI*
Pc21g08790	Putative NADP-dependent oxidoreductase	kAKL*
Pc21g09440	Putative acyl-CoA dehydrogenase	qSKL*
Pc21g09470	Putative feruloyl-CoA synthetase	rAKL*
Pc21g09480	3-hydroxy-3-methylglutaryl CoA lyase HlyA	kSKL*
Pc21g09780	Putative fructosyl amine oxidase	aSRL*
Pc21g11670	Putative NADPH:quinone reductase / Zn-dependent oxidoreductase	kSKL*
Pc21g11780	Putative 4-hydroxyphenylpyruvate dioxygenase	kSRI*
Pc21g12160	Putative flavocytochrome b2 protein / FMN-dependent dehydrogenase	qVKL*
Pc21g12260	Putative alcohol dehydrogenase, class V	qAKL*
Pc21g14590	Insulin-degrading enzyme / a factor processing peptidase Ste23	dAKL*
Pc21g14640	Putative dephospho-CoA kinase	kAKL*
Pc21g16040	Conserved hypothetical protein	yANI*
Pc21g16080	Putative HypA-like protein / oxidase required for aflatoxin biosynthesis	qAHI*
Pc21g16710	Conserved protein with double-stranded beta helix domain	sARL*
Pc21g16840	Putative NAD+-dependent 15-hydroxyprostaglandin dehydrogenase	IPKL*
Pc21g17590	Putative acyl-CoA dehydrogenase	kSHL*
Pc21g17810	Putative flavocytochrome b2 protein / FMN-dependent dehydrogenase	rPKL*
Pc21g19000	Putative acyl-CoA dehydrogenase	qSKV*
Pc21g19510	Epoxide hydrolase	aGKL*
Pc21g20650	Putative 4-coumarate-CoA ligase	kARL*
Pc21g21120	Putative monoamine oxidase N	sSHL*
Pc21g21370	Acyl-coenzyme A:isopenicillin N acyltransferase	nARL*
Pc21g21810	Putative levodione reductase / short chain dehydrogenase	
Pc21g22010	Putative 4-coumarate-CoA ligase	pSKL*

Pc21g22060	Conserved protein with DUF1446 domain of unknown function	rGKL*	
Pc21g22360	Vanillyl-alcohol oxidase VaoA	tTKL*	
Pc21g23650	D-lactate dehydrogenase	pVRL*	
Pc21g23700	Long-chain-fatty-acid alcohol oxidase	iARL*	
Pc21g23730	Putative feruloyl-CoA synthetase		8 / qRLqqtIsHV
Pc22g00060	Putative fructosyl amine oxidase	aAKL*	
Pc22g00300	Putative flavocytochrome b2 protein / FMN-dependent dehydrogenase	nSKL*	
Pc22g00460	Protein with dehydrogenase domain of non-ribosomal peptide synthetases	kARI*	
Pc22g00860	Putative ascorbate-peroxidase	rARL*	
Pc22g01300	Lipid transfer protein Scp2	gAKL*	
Pc22g02620	Monoglyceride lipase	kAKL*	
Pc22g03680	Putative NADPH-dependent beta-ketoacyl reductase	sAKL*	
Pc22g05280	Putative histidine triad family hydrolase	rGKL*	
Pc22g05640	Putative toxin biosynthesis protein / hydrolase	eSKL*	
Pc22g06820	3-ketoacyl-CoA thiolase Pthik		6 / qRLsqvssHF
Pc22g07280	Putative peroxisomal acyl-CoA thioesterase	kVKL*	
Pc22g07740	Putative acyl-CoA oxidase	rAKL*	
Pc22g10020	Putative FAD-dependent alcohol dehydrogenase / GMC oxidoreductase	qPRL*	
Pc22g10030	Betaine-aldehyde dehydrogenase	fAKL*	
Pc22g11470	Putative flavocytochrome b2 protein / FMN-dependent dehydrogenase	rARL*	
Pc22g11520	Conserved hypothetical protein	kVRL*	
Pc22g12040	Putative nitroreductase	fGKL*	
Pc22g13390	Putative Zn-dependent alcohol dehydrogenase	gSKL*	
Pc22g13680	Isopenicillin N-CoA epimerase	kSKI*	
Pc22g14270	Putative 2-nitropropane dioxygenase family oxidoreductase	sSKL*	
Pc22g14860	Copper amine oxidase AMO		4 / dRLqqlthQV
Pc22g14900	Phenylacetyl-CoA ligase PclA	gSKI*	
Pc22g15030	Peroxisomal 2,4-dienoyl-CoA reductase Sps19	kSKL*	
Pc22g15170	Putative propionyl-CoA carboxylase		19 / dRLhqvssHI
Pc22g15180	Putative pyruvate carboxylase like protein	rGKL*	
Pc22g15400	Putative toxin biosynthesis protein / hydrolase	rSKI*	
Pc22g16280	Conserved hypothetical protein	eGRL*	
Pc22g16620	Protein weakly similar to ethanolamine utilization protein	tTKL*	
Pc22g17070	Putative sterol carrier protein-2	IARF*	
Pc22g17230	Putative aldehyde dehydrogenase	kSKL*	
Pc22g17240	Putative copper amine oxidase	kPRM*	

Pc22g18190	Putative flavocytochrome b2 protein / FMN-dependent dehydrogenase	sSKL*	
Pc22g19270	Putative glycolate oxidase-like protein / FMN-dependent dehydrogenase	ISKL*	
Pc22g19300	Putative aldehyde dehydrogenase	gTRL*	
Pc22g19440	Aspartate transaminase Aat2	sAKL*	9 / dRLsslssHIM
Pc22g19490	Putative 2-nitropropane dioxygenase family oxidoreductase	vSKL*	
Pc22g20270	Phenylacetyl-CoA ligase PhIB	kAKL*	
Pc22g20320	Putative dehydrogenase	IARL*	
Pc22g20370	Putative enoyl-CoA hydratase/isomerase family protein	nSKL*	
Pc22g20380	Acetyltransferase SidF	nAKL*	
Pc22g20960	Urate oxidase Uaz	kAKL*	
Pc22g21240	Catalase CatC	pARL*	
Pc22g22390	Putative enoyl-CoA hydratase/isomerase family protein	pSKL*	
Pc22g23350	Putative fructosyl amine oxidase	aAKL*	
Pc22g23700	Putative FAD dependent oxidoreductase, partial	ISRL*	
Pc22g24590	Putative FAD binding domain protein	qGRL*	
Pc22g24620	Putative sugar phosphate isomerases/epimerase	kHKL*	
Pc22g24630	Putative isopenicillin N-CoA epimerase, partial	aAKI*	
Pc22g24780	Putative 4-coumarate-CoA ligase	kAKL*	
Pc22g24860	Putative aldehyde dehydrogenase	IPRL*	
Pc22g25120	Putative enoyl-CoA hydratase/isomerase family protein	hSKL*	
Pc22g25150	Putative very-long-chain acyl-CoA dehydrogenase	gSKL*	
Pc22g25190	Conserved hypothetical protein	aVKL*	
Pc22g25570	Putative aminoglycoside phosphotransferase	eGKL*	
Pc23g00390	Conserved hypothetical protein	kAKL*	