

Table S7. PAS domain-containing CDSs in the *P. thermopropionicum* genome.

Locus tag	Output domain*	Description	Proteins encoded by physically linked genes
One component system			
PTH0508	HTH_3	AAA-type ATPase	Aldehyde:ferredoxin oxidoreductase
PTH0546	GGDEF		MoxR-like ATPases COG0714
PTH0752	GntR		Hypothetical protein COG1719
PTH0844	LysR	AAA-type ATPase, RocR-like	Pyruvate:ferredoxin oxidoreductase
PTH0850	AraC	AAA-type ATPase, RocR-like	Class IV alcohol dehydrogenase
PTH1192	HTH_8		Acetyl-CoA carboxylase
PTH1355	HTH_11	AAA-type ATPase, RocR-like	Methylmalonyl-CoA pathway enzymes
PTH1663	GGDEF		Pyruvate:ferredoxin oxidoreductase
PTH1772	HTH_3	AAA-type ATPase, RocR-like	Acyl CoA:acetate/3-ketoacid CoA transferase
PTH2004	GGDEF		Arginine/lysine/ornithine decarboxylases
PTH2615	HD		Molybdopterin biosynthesis enzyme
PTH2869	CBF/NF-Y	AAA-type ATPase	Hypothetical protein
Two component system			
PTH0100	LytR		Uncharacterized dehydrogenase
PTH1349	HTH_3		TRAP C4-dicarboxylate transporter
PTH1422	No RR		
PTH1778	No RR		
PTH1830	MarR		Predicted enzyme COG0325
PTH2257	AraC		Predicted permeases COG0730
PTH2684	LuxR		Tas alcohol dehydrogenase

\*According to the pfam database. In two-component systems, those in neighboring response regulators are presented. No RR, no response regulator physically linked.