

**Table S9. Gene-function associations based on the conserved coexpression network CoExp<sub>TbExLif</sub>.** Pathways are defined according to KEGG. Refer to Table S1 for more details.

	Proteasome	Oxidative phosphorylation	Ribosome	TriTrypDB annotation (v2.0)	Notes
Tb927.10.6800 (Tb10.6k15.3970)	*			Developmentally regulated GTP-binding protein	
Tb927.5.1520	*			Heat shock protein HslVU, ATPase subunit HslU	
Tb927.7.4870	**			Hypothetical protein, conserved	
Tb09.160.0740		*		Hypothetical protein, conserved	
Tb927.10.9830 (Tb10.6k15.0480)		*		Hypothetical protein, conserved	a
Tb927.10.8320 (Tb10.6k15.2180)		*		Cytochrome oxidase subunit IX	
Tb11.02.4120		**		Hypothetical protein, conserved	a
Tb09.160.1820		*		Cytochrome oxidase subunit V	
Tb927.10.5050 (Tb10.70.2155)		*		Hypothetical protein, conserved	b
Tb927.10.4240 (Tb10.70.3010)		**		Hypothetical protein, conserved	c,d
Tb927.3.1410		*		Cytochrome oxidase subunit VII	
Tb927.3.700		*		Hypothetical protein, conserved	d
Tb927.4.3450		*		Hypothetical protein, conserved	b,d
Tb927.8.5120		*		Cytochrome c	
Tb927.10.520 (Tb10.70.7760)		*		Hypothetical protein, conserved	a
Tb927.5.1060		**		Mitochondrial processing peptidase, beta subunit	
Tb927.5.2930		**		Hypothetical protein, conserved	a
Tb927.4.1360		*		Hypothetical protein, conserved	e
Tb11.47.0022		*		Hypothetical protein, conserved	a
Tb927.6.590		*		Hypothetical protein, conserved	b
Tb927.7.3500		*		Glutathione-S-transferase/glutaredoxin	
Tb927.7.840		*		Hypothetical protein, conserved	a
Tb927.5.3090		*		Hypothetical protein, conserved	a
Tb927.10.15960 (Tb10.61.0320)		*		Hypothetical protein, conserved	
Tb927.4.720		*		Hypothetical protein, conserved	b
Tb927.3.920		*		Hypothetical protein, conserved	
Tb927.5.590			*	Protein phosphatase 1, regulatory subunit	f
Tb11.01.5720			*	Ribosomal protein L18	
Tb11.55.0002			*	Protein phosphatase 2C	
Tb927.4.3660			*	Hypothetical protein, conserved	

\*  $1 \times 10^{-4} < p\text{-value} \leq 0.01$

\*\*  $1 \times 10^{-7} < p\text{-value} \leq 1 \times 10^{-4}$

a These proteins have been shown to be associated with ATP synthase complex (PLoS Pathog 2009, 5:e1000436).

b These proteins have been reported to be mitochondrial (Proteomics 2009, 9:434-450).

c These proteins have been reported to be associated with mitochondrial membrane (Proteomics 2009, 9:5497-5508).

d The mRNA of these proteins have the UAG(G)UA(G/U) element, which is also found in the transcripts of many cytochrome c oxidase subunits (Nucleic Acids Res 2006, 34:5312-5324).

e Tb927.4.1360 is suggested as a PF-specific glycosomal protein (Proteomics 2006, 6:3275-3293).

f Protein phosphatase 1 is known to regulate the activity of ribosomal protein S6 (J Biol Chem 1987, 262:14389-14393).