

**Table S8. Prediction of GO cellular component based on the coexpression network CoExp<sup>2</sup><sub>Tbr</sub>. Refer to Table S3 for more details.**

|                | Ribosome | Intracellular | Cytoplasm | Chaperonin-containing T-complex | Integral to membrane | Dynein complex | TriTrypDB annotation (v2.0)                          |
|----------------|----------|---------------|-----------|---------------------------------|----------------------|----------------|------------------------------------------------------|
| Tb11.02.0445   | *        |               |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.5.4120   | **       | **            |           |                                 |                      |                | Hypothetical protein                                 |
| Tb09.160.2400  | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.2.4700   | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.3.3570   | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.4.3660   | **       | **            |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.6.2330   | *****    | *****         |           |                                 |                      |                | RGG protein                                          |
| Tb927.10.3970  | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.6.1130   | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb09.211.4690  | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb09.160.3160  | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.8.6250   | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb11.01.7730   | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.10.160   | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb11.01.1570   | *        | *             |           |                                 |                      |                | NUDIX hydrolase                                      |
| Tb927.7.4120   | *        | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.3.1370   | ***      | ***           |           |                                 |                      |                | 40S ribosomal protein S25                            |
| Tb11.55.0016   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.7.6280   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.7.3530   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.7.3580   |          | *             |           |                                 |                      |                | Protein kinase                                       |
| Tb09.244.2390  |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb11.02.0450   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.10.12100 |          | *             |           |                                 |                      |                | RNA-binding protein                                  |
| Tb927.3.3880   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.4.3830   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.10.9050  |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb09.211.4180  |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.5.4010   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb11.01.3530   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.4.2570   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.2.5440   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb09.244.2710  |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb09.160.2900  |          | *             |           |                                 |                      |                | PRP3                                                 |
| Tb11.01.6000   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb11.02.4790   |          | *             |           |                                 |                      |                | ATG16/SAP18/CVT11/APG16                              |
| Tb09.211.0500  |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.10.16140 |          | *             |           |                                 |                      |                | Adenylate/guanylate cyclase                          |
| Tb927.3.2470   |          | *             |           |                                 |                      |                | Pumilio RNA binding protein                          |
| Tb927.7.5150   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.10.9180  |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.1.1400   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb11.01.1910   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.7.1450   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.6.1180   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.4.1980   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.1.2200   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.8.3090   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.5.1770   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.8.2000   |          | *             |           |                                 |                      |                | Cyclophilin type peptidyl-prolyl cis-trans isomerase |
| Tb11.01.6835   |          | *             |           |                                 |                      |                | Hypothetical protein                                 |
| Tb927.2.2450   |          | *             |           |                                 |                      |                | Ribosomal RNA methyltransferase                      |
| Tb927.7.640    |          |               | **        |                                 |                      |                | Hypothetical protein                                 |

|                |  |  |  |    |     |                                                     |
|----------------|--|--|--|----|-----|-----------------------------------------------------|
| Tb09.160.2090  |  |  |  | *  |     | Hypothetical protein                                |
| Tb927.5.2570   |  |  |  | *  |     | Translation initiation factor                       |
| Tb09.211.1360  |  |  |  | *  |     | Hypothetical protein                                |
| Tb09.211.0690  |  |  |  | ** |     | Hypothetical protein                                |
| Tb927.10.14790 |  |  |  | *  |     | Aminopeptidase                                      |
| Tb09.244.2190  |  |  |  |    | *   | Hypothetical protein                                |
| Tb09.v1.0820   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.5.3100   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.10.9510  |  |  |  |    | *** | Hypothetical protein                                |
| Tb09.211.4820  |  |  |  |    | *   | Hypothetical protein                                |
| Tb09.160.5350  |  |  |  |    | *   | Variant surface glycoprotein (VSG)-related          |
| Tb09.142.0320  |  |  |  |    | *   | Hypothetical protein                                |
| Tb11.02.1564   |  |  |  |    | *   | Leucine-rich repeat protein (LRRP)                  |
| Tb927.10.1770  |  |  |  |    | **  | Hypothetical protein                                |
| Tb11.02.3710   |  |  |  |    | *   | Hypothetical protein                                |
| Tb11.02.1565   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.10.6740  |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.1.5160   |  |  |  |    | *** | Hypothetical protein                                |
| Tb927.1.5180   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.3.580    |  |  |  |    | **  | Leucine-rich repeat protein (LRRP)                  |
| Tb11.02.1640   |  |  |  |    | *   | Kinetoplastid-specific dual specificity phosphatase |
| Tb11.01.6210   |  |  |  |    | *   | Procyclin-associated gene 2-like protein            |
| Tb927.3.2590   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.3.570    |  |  |  |    | *   | Expression site-associated gene (ESAG) protein      |
| Tb09.244.0640  |  |  |  |    | *** | Variant surface glycoprotein (VSG)                  |
| Tb927.10.8980  |  |  |  |    | **  | Hypothetical protein                                |
| Tb11.01.6140   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.1.1850   |  |  |  |    | *   | Hypothetical protein                                |
| Tb09.160.1440  |  |  |  |    | *   | Hypothetical protein                                |
| Tb11.02.1470   |  |  |  |    | **  | Hypothetical protein                                |
| Tb927.10.1230  |  |  |  |    | **  | Hypothetical protein                                |
| Tb927.3.3980   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.10.14770 |  |  |  |    | *   | Protein kinase                                      |
| Tb927.8.7540   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.4.4790   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.10.3360  |  |  |  |    | *   | Hypothetical protein                                |
| Tb11.01.6220   |  |  |  |    | *   | Procyclin-associated gene 4 (PAG4) protein          |
| Tb927.10.1040  |  |  |  |    | *   | Serine carboxypeptidase III precursor               |
| Tb927.4.990    |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.7.380    |  |  |  |    | *   | Hypothetical protein                                |
| Tb11.38.0003   |  |  |  |    | **  | Variant surface glycoprotein (VSG)                  |
| Tb927.6.1730   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.10.8860  |  |  |  |    | *   | Hypothetical protein                                |
| Tb09.160.4760  |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.3.5830   |  |  |  |    | *** | Expression site-associated gene (ESAG) protein      |
| Tb927.1.5030   |  |  |  |    | *   | Leucine-rich repeat protein (LRRP)                  |
| Tb927.10.9450  |  |  |  |    | **  | Hypothetical protein                                |
| Tb927.5.1440   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.10.530   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.7.190    |  |  |  |    | *   | Thimet oligopeptidase A                             |
| Tb927.4.1110   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.5.3600   |  |  |  |    | *   | ATP-dependent DEAD/H RNA helicase                   |
| Tb09.244.1950  |  |  |  |    | *** | Hypothetical protein                                |
| Tb09.160.0360  |  |  |  |    | *   | Hypothetical protein                                |
| Tb11.01.7380   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.3.1490   |  |  |  |    | *   | Leucine-rich repeat protein (LRRP)                  |
| Tb11.01.7530   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.8.980    |  |  |  |    | *   | Phosphoacetylglucosamine mutase                     |
| Tb927.1.5060   |  |  |  |    | *   | Variant surface glycoprotein (VSG)-related          |
| Tb927.5.750    |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.4.810    |  |  |  |    | *   | Expression site-associated gene (ESAG) protein      |
| Tb927.10.1780  |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.3.2520   |  |  |  |    | **  | Expression site-associated gene (ESAG) protein      |
| Tb927.3.5720   |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.5.4600   |  |  |  |    | **  | Expression site-associated gene (ESAG) protein      |
| Tb927.5.1400   |  |  |  |    | *** | Hypothetical protein                                |
| Tb927.3.560    |  |  |  |    | **  | Expression site-associated gene (ESAG) protein      |
| Tb927.10.15440 |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.3.980    |  |  |  |    | **  | Hypothetical protein                                |
| Tb927.10.5710  |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.10.5700  |  |  |  |    | *   | Hypothetical protein                                |
| Tb927.5.1390   |  |  |  |    | *   | 64 kDa invariant surface glycoprotein               |
| Tb927.7.6860   |  |  |  |    | *   | Expression site-associated gene (ESAG) protein      |

|               |  |  |  |  |     |                                                             |
|---------------|--|--|--|--|-----|-------------------------------------------------------------|
| Tb927.3.2500  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb927.8.4360  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb927.3.5680  |  |  |  |  | *   | Variant surface glycoprotein (VSG)-related                  |
| Tb11.01.7860  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb927.3.1870  |  |  |  |  | **  | Hypothetical protein                                        |
| Tb927.2.3340  |  |  |  |  | **  | Hypothetical protein                                        |
| Tb927.8.6720  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb927.8.5080  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb927.8.7330  |  |  |  |  | **  | Hypothetical protein                                        |
| Tb927.3.520   |  |  |  |  | **  | Expression site-associated gene (ESAG) protein              |
| Tb927.3.5690  |  |  |  |  | *** | Hypothetical protein                                        |
| Tb927.8.7310  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb927.6.540   |  |  |  |  | **  | Gene related to expression site-associated gene 2 (GRESAG2) |
| Tb927.1.2600  |  |  |  |  | *   | Pumilio/PUF RNA binding protein 9                           |
| Tb09.160.0720 |  |  |  |  | *   | Hypothetical protein                                        |
| Tb11.01.5260  |  |  |  |  | *   | Radial spoke protein RSP11                                  |
| Tb927.1.2760  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb09.244.2050 |  |  |  |  | *   | Hypothetical protein                                        |
| Tb09.244.1650 |  |  |  |  | *   | Hypothetical protein                                        |
| Tb11.01.6390  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb927.3.4510  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb927.10.8780 |  |  |  |  | *   | Hypothetical protein                                        |
| Tb927.1.4310  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb11.02.3880  |  |  |  |  | **  | Hypothetical protein                                        |
| Tb927.3.3300  |  |  |  |  | *   | Hypothetical protein                                        |
| Tb11.02.4640  |  |  |  |  | *   | Tubulin-tyrosine ligase-like protein                        |
| Tb927.3.3110  |  |  |  |  | *   | Hypothetical protein                                        |

\*  $1 \times 10^{-4} < \text{p-value} \leq 0.01$   
 \*\*  $1 \times 10^{-7} < \text{p-value} \leq 1 \times 10^{-4}$   
 \*\*\*  $1 \times 10^{-14} < \text{p-value} \leq 1 \times 10^{-7}$   
 \*\*\*\*  $1 \times 10^{-28} < \text{p-value} \leq 1 \times 10^{-14}$   
 \*\*\*\*\*  $\text{p-value} \leq 1 \times 10^{-28}$