Supplemental Table S2. Human homologues with disease association.

T. brucei gene	Human homologue	e-value*	Human gene product description	Human disease phenotype
Tb927.10.5380	XP_005247666.1	0	IFT122 – intraflagellar transport protein 122, homolog isoform X13	Cranioectodermal dysplasia 1 (OMIM #218330)
Tb927.4.3810	BAF82512.1	0	POLR2B – RNA polymerase II subunit B	Age-related macular degeneration [1], adult height [2, 3]
Tb927.7.7260	XP_011512661.1	4.64E-135	Kif6 – kinesin-like protein, isoform X4	ADHD [4], antibody response to smallpox vaccine [5], dental caries [6], childhood obesity [7]
Tb927.11.3140	AAH31244.1	5.35E-119	Dyrk4 – Dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 4	Allergic rhinitis [8]
Tb927.8.5020	CAD38878.1	1.16E-116	VWA8 – von Willebrand factor A domain containing 8	Emphysema [9], tuberculosis risk [10]
Tb927.11.14680	NP_001341508.1	1.06E-113	ATR – serine/threonine-protein kinase, isoform 2	Familial cutaneous telangiectasia and cancer syndrome (OMIM #614564), Seckel syndrome 1 (OMIM #210600)
Tb927.11.6350	XP_006712094.1	4.90E-102	ATAD2B – ATPase family AAA domain-containing protein 2B, isoform X10	Pathophysiology of childhood obesity [7]
Tb927.3.4020	XP_016884319.1	2.00E-94	PI4KA – phosphatidylinositol 4-kinase alpha, isoform X4	Polymicrogyria, perisylvian, with cerebellar hypoplasia and arthrogryposis (OMIM #616531)
Tb927.10.2900	BAG37316.1	5.10E-78	KPNB1 – karyopherin subunit beta 1	Circulating levels of very long-chain saturated fatty acids [11], multiple sclerosis susceptibility [12]
Tb927.10.13000	EAW93986.1	8.13E-66	PDE1C – phosphodiesterase 1C, calmodulin-dependent 70kDa, isoform CRA_b	Autosomal dominant deafness (OMIM #618140), endometriosis [13], antiphospholipid antibodies [14]
Tb927.10.8390	AAH40929.1	3.35E-64	HERC1 – HECT and RLD domain containing E3 ubiquitin protein ligase family member 1	Macrocephaly, dysmorphic facies, and psychomotor retardation (OMIM #617011), neuronal pattern development [15]
Tb927.10.1510	AAH00779.2	2.47E-60	CNOT1 – CCR4-NOT transcription complex subunit 1	Holoprosencephaly 12 with/without pancreatic angenesis (OMIM #618500), associated with schizophrenia [16], QT interval duration [17-20], PR interval, and QRS duration [21]
Tb927.10.13000	AAD50326.1	5.70E-59	RAD50 – RAD50 double strand break repair protein	Nijmegen breakage syndrome-like disorder (OMIM #613078), IgE levels [22], asthma [23, 24] and psoriasis [25]
Tb927.9.9580	AAF23275.2	7.80E-56	TTLL5 – tubulin tyrosine ligase like 5	Cone-rod dystrophy 19 (OMIM #615860), susceptibility to ischemic stroke and coronary heart disease [26], adult height [27]

Tb927.8.5970	BAG37520	1.67E-50	CUL4B – cullin-4B isoform X3	Syndromic X-linked mental retardation, Cabezas type (OMIM #300354)
Tb927.8.1890	AAA35730.1	2.44E-49	CYC1 – cytochrome c1, partial	Mitochondrial complex III deficiency, nuclear type 6 (OMIM #615453)
Tb927.11.12430	AAT38107.1	4.10E-46	CDC14A – cell division cycle 14 homolog A	Deafness, autosomal recessive 32, with/without immotile sperm (OMIM #608653)
Tb927.8.4510	BAG37189.1	1.05E-36	CCDC65 – coiled-coil domain containing 65	Primary ciliary dyskinesia (OMIM #615504)
Tb927.5.950	CAA09375.1	1.87E-32	GLRX3 – glutaredoxin 3	Susceptibility to HIV-1 [28]
Tb927.10.9380	BAC04112.1	1.17E-23	UBXN11 – UBX domain protein 11	Pathophysiology of childhood obesity [7]
Tb927.9.9580	EAW97654.1	2.98E-20	UTP20 – UTP20 small subunit (SSU) processome component	Influences neurodegeneration in Alzheimer's disease [29], associated with subclinical atherosclerosis [30], onset of alcohol dependence [31]
Tb927.8.5290	BAG64996.1	2.61E-17	ITCH – itchy E3 ubiquitin protein ligase	Autoimmune disease, syndromic multisystem (OMIM #613385)
Tb927.5.3650	NP_055710.2	2.70E-17	CEP162 – centrosomal protein of 162 kDa isoform a	Associated with diabetic retinopathy [32]
Tb927.5.4110	AAH50721.1	7.08E-14	CEP104 – centrosomal protein 104	Joubert syndrome 25 (OMIM #616781)
Tb927.5.1920	EAW64669.1	6.41E-13	CCDC13 – coiled-coil domain containing 13, isoform CRA_a	Clozapine-induced agranulocytosis [33], chronic periodontitis [34], pathophysiology of childhood obesity [7]
Tb927.10.970	EAW91271.1	4.26E-12	ASPM – assembly facto for spindle microtubule	Primary autosomal recessive microcephaly (OMIM #608716), lupus nephritis susceptibility [35], ischemic stroke [36]
Tb927.7.290	XP_005250264.1	1.18E-09	FBXL13 – F-box/LRR-repeat protein 13 isoform X5	Blood pressure response to interventions [37]
Tb927.7.1560	AAI03916.1	1.23E-09	TTC6 – tetratricopeptide repeat domain 6	Allergy-specific susceptibility [38]
Tb927.8.4510	AAH36816.1	2.49E-06	NME8 – NME/NM23 family member 8	Primary ciliary dyskinesia (OMIM #610852), risk of fracture [39], susceptibility for Alzheimer's disease [40]
Tb927.8.6870	BAG06714.1	9.04E-05	MYO5B – myosin VB	Congenital microvillous atrophy (OMIM #251850)
Tb927.10.5380	EAW91274.1	0.000116493	ASPM – assembly factor for spindle microtubules	Primary autosomal recessive microcephaly (OMIM #608716), ischemic stroke [36], lupus nephritis susceptibility in women [35]
Tb927.6.4750	BAG56787.1	0.000868412	BUB3 – BUB3 mitotic checkpoint protein	Age of menarche and natural menopause [41]
Tb927.11.4210	AAC18038.1	0.00394461	STUB1 – STIP1 homology and U-box containing protein	Autosomal recessive 16 spinocerebellar ataxia (OMIM #615768), spinocerebellar ataxia 48 (OMIM #618093)
Tb927.3.1190	EAW64508.1	0.00498254	DLEC1 – DLEC1 cilia and flagella associated protein	Lung cancer, malignant tumor of esophagus*

Tb927.5.3650	EAW71112.1	0.00600032	MLPH melanophilin, isoform CRA_a	Griscelli syndrome type 3 (OMIM #609227), prostate cancer susceptibility loci [42]
Tb927.11.6430	XP_011524505.1	0.0250287	CCDC68 – coiled-coil domain-containing protein 68, isoform X3	Schizophrenia [43], severe diabetic retinopathy [44], psychiatric disorders [45]
Tb927.3.4510	BAH13910.1	0.0509298	TRAF3 – TNF receptor associated factor 3	Schizophrenia [46], susceptibility to herpes simplex encephalitis (OMIM #614849)
Tb927.8.5020	BAA25448.1	0.0592341	IQSEC2 – IQ motif and Sec7 domain ArfGEF 2	X-linked 1 mental retardation (OMIM #309530), haploinsufficeincy [47]

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