

**Table S1.** Enhancer genes of amyloid toxicity in yeast and their mammalian orthologues

Systematic name	Yeast gene	Function	Mammalian gene name
YAL011W	<i>SWC3</i>	SWr Complex, protein of unknown function	w/o orthologue
YAL021C	<i>CCR4</i>	Carbon Catabolite Repression, component of the CCR4-NOT transcriptional complex	<i>ANGEL1, LOC729530, CCRN4L, ANGEL2, 2'-PDE</i>
YAL040C	<i>CLN3</i>	CycLiN, g1 cyclin involved in cell cycle progression	<i>CCNB2, CNTD2</i>
YAL044C	<i>GCV3</i>	GlyCine cleavage, h subunit of the mitochondrial glycine decarboxylase complex	<i>LOC729080</i>
YAL060W	<i>BDH1</i>	Butanediol DeHydrogenase, NAD-dependent	<i>SORD</i>
YBL071C-B	unass.	Putative protein of unknown function	w/o orthologue
YBR048W	<i>RPS11B</i>	Ribosomal Protein of the Small subunit, protein component of the small (40S) ribosomal subunit	<i>RPS11</i>
YBR058C-A	<i>TSC3</i>	Temperature-sensitive Suppressors of Csg2 mutants, protein that stimulates the activity of serine palmitoyltransferase	w/o orthologue
YBR066C	<i>NRG2</i>	Negative Regulator of Glucose-controlled genes, transcriptional repressor	<i>ZBTB16, KLF14, KLF7, KLF5,</i>
YBR181C	<i>RPS6B</i>	Ribosomal Protein of the Small subunit, protein component of the small (40S) ribosomal subunit	<i>RPS6</i>
YBR186W	<i>PCH2</i>	Pachytene Checkpoint, hexameric ring ATPase that remodels chromosome axis protein Hop1p	<i>TRIP13</i>
YBR206W	unass.	Dubious open reading frame	w/o orthologue
YBR214W	<i>SDS24</i>	Homolog of <i>S. pombe</i> SDS23, protein involved in cell separation during budding	w/o orthologue
YBR215W	<i>HPC2</i>	Histone Periodic Control, subunit of the HIR complex	w/o orthologue
YBR246W	<i>RRT2</i>	Regulator of rDNA Transcription, methyltransferase performing penultimate step of diphthamide biosynthesis	<i>DPH7</i>
YBR266C	<i>SLM6</i>	Synthetic Lethal with Mss4, protein with a potential role in actin cytoskeleton organization	w/o orthologue
YBR267W	<i>REI1</i>	REquired for Isotropic bud growth, cytoplasmic pre-60S factor	<i>ZNF622</i>
YBR291C	<i>CTP1</i>	Citrate Transport Protein, mitochondrial inner membrane citrate transporter	<i>SLC25A1</i>
YCR020W-B	<i>HTL1</i>	High-Temperature Lethal, component of the RSC chromatin remodeling complex	w/o orthologue

YCR061W	<i>TVS1</i>	Protein of unknown function	w/o orthologue
YCR094W	<i>CDC50</i>	Cell Division Cycle, endosomal protein that interacts with phospholipid flippase Drs2p	<i>TMEM30A, TMEM30B</i>
YDL009C	unass.	Protein of unknown function	w/o orthologue
YDL063C	<i>SYO1</i>	SYnchronized impOrt or SYmpOrtin, transport adaptor or symportin	<i>HEATR3</i>
YDL075W	<i>RPL31A</i>	Ribosomal Protein of the Large subunit, ribosomal 60S subunit protein L31A	<i>LOC641311</i>
YDL080C	<i>THI3</i>	THIamine metabolism, regulatory protein that binds Pdc2p and Thi2p transcription factors	w/o orthologue
YDL101C	<i>DUN1</i>	DNA-damage UNinducible, cell-cycle checkpoint serine-threonine kinase	<i>CHEK2</i>
YDR123C	<i>INO2</i>	INOsitol requiring, transcription factor	w/o orthologue
YDR153C	<i>ENT5</i>	Epsin N-Terminal homology, protein containing an N-terminal epsin-like domain	<i>EPNI</i>
YDR159W	<i>SAC3</i>	Suppressor of ACtin, mRNA export factor	<i>MCM3AP, SAC3D1</i>
YDR171W	<i>HSP42</i>	Heat Shock Protein, small heat shock protein (sHSP) with chaperone activity	w/o orthologue
YDR174W	<i>HMO1</i>	High MObility group (HMG) family, chromatin associated high mobility group (HMG) family member	<i>HMG20A</i>
YDR186C	<i>SND1</i>	Putative protein of unknown function	w/o orthologue
YDR195W	<i>REF2</i>	RNA End Formation, rNA-binding protein	w/o orthologue
YDR214W	<i>AHA1</i>	Activator of Heat shock protein 90 ATPase, co-chaperone that binds Hsp82p and activates its ATPase activity	<i>AHSA1</i>
YDR219C	<i>MFB1</i>	Mitochondria-associated F-Box protein, mitochondria-associated F-box protein	w/o orthologue
YDR225W	<i>HTA1</i>	Histone h Two A, histone H2A	<i>H2AFB2</i>
YDR378C	<i>LSM6</i>	Like SM, lsm (Like Sm) protein	<i>LSM6, SNRPF</i>
YDR537C	unass.	Dubious open reading frame	w/o orthologue
YER016W	<i>BIM1</i>	BINDing to Microtubules, microtubule plus end-tracking protein	<i>MAPRE1, MAPRE2, MAPRE3</i>
YER066W	<i>RRT13</i>	Regulator of rDNA Transcription, putative protein of unknown function	<i>FBXW7</i>
YER068W	<i>MOT2</i>	Modulator Of Transcription, ubiquitin-protein ligase subunit of the CCR4-NOT complex	<i>CNOT4</i>
YER092W	<i>IES5</i>	Ino Eighty Subunit, non-essential INO80 chromatin remodeling complex subunit	w/o orthologue
YER119C-A	unass.	Dubious open reading frame	w/o orthologue

YER151C	<i>UBP3</i>	UBiquitin-specific Protease, ubiquitin-specific protease involved in transport and osmotic response	<i>USP10</i>
YFR034C	<i>PHO4</i>	PHOspate metabolism, basic helix-loop-helix (bHLH) transcription factor of the myc-family	<i>MLXIP</i>
YFR036W	<i>CDC26</i>	Cell Division Cycle, subunit of the Anaphase-Promoting Complex/Cyclosome (APC/C)	w/o orthologue
YGL007C-A	unass.	Putative protein of unknown function	w/o orthologue
YGL041C-B	unass.	Putative protein of unknown function	w/o orthologue
YGL168W	<i>HUR1</i>	HydroxyUrea Resistance, protein of unknown function	w/o orthologue
YGL222C	<i>EDC1</i>	Enhancer of mRNA DeCapping, rNA-binding protein that activates mRNA decapping directly	w/o orthologue
YGL241W	<i>KAP114</i>	KAryoPherin, karyopherin	<i>IPO9</i>
YGL253W	<i>HXK2</i>	HeXoKinase, hexokinase isoenzyme 2	<i>GCK, HKDC1, HK2</i>
YGR006W	<i>PRP18</i>	Pre-mRNA Processing, splicing factor and component of snRNP U5	<i>PRPF18</i>
YGR015C	<i>EAT1</i>	Putative protein of unknown function	<i>ABHD11</i>
YGR081C	<i>SLX9</i>	Protein required for pre-rRNA processing	w/o orthologue
YGR133W	<i>PEX4</i>	PEroXin, peroxisomal ubiquitin conjugating enzyme	<i>UBE2F</i>
YGR226C	unass.	Dubious open reading frame	w/o orthologue
YGR271C-A	<i>EFG1</i>	Exit From G1, essential protein required for maturation of 18S rRNA	w/o orthologue
YGR284C	<i>ERV29</i>	ER Vesicle, protein localized to COPII-coated vesicles	<i>SURF4</i>
YHR021C	<i>RPS27B</i>	Ribosomal Protein of the Small subunit, protein component of the small (40S) ribosomal subunit	<i>RPS27</i>
YHR025W	<i>THR1</i>	THReonine requiring, homoserine kinase	w/o orthologue
YHR064C	<i>SSZ1</i>	Hsp70 protein that interacts with Zuo1p (a DnaJ homolog)	<i>HSPA2,HSPA8,HSPA14, HSPA6,</i>
YIL154C	<i>IMP2</i>	Independent of Mitochondrial Particle, transcriptional activator involved in maintenance of ion homeostasis	w/o orthologue
YIL156W	<i>UBP7</i>	UBiquitin-specific Protease, ubiquitin-specific protease that cleaves ubiquitin-protein fusions	<i>USP28,USP29,USP37,USP50, USP8,USP32,USP51,USP26, USP2,USP21,</i>
YIL157C	<i>COA1</i>	Cytochrome Oxidase Assembly, mitochondrial inner membrane protein	w/o orthologue
YJL012C-A	unass.	Merged open reading frame	w/o orthologue
YJL027C	unass.	Putative protein of unknown function	w/o orthologue

YJL080C	<i>SCP160</i>	S. cerevisiae protein involved in the Control of Ploidy, essential RNA-binding G protein effector of mating response pathway	<i>HDLBP</i>
YJL123C	<i>MTC1</i>	Maintenance of Telomere Capping, protein of unknown function that may interact with ribosomes	w/o orthologue
YJL124C	<i>LSM1</i>	Like SM, lsm (Like Sm) protein	<i>LSM1</i>
YJL141C	<i>YAK1</i>	Yet Another Kinase, serine-threonine protein kinase	<i>DYRK1A/B,HIPK3,HIPK4,HIPK1,</i>
YJL176C	<i>SWI3</i>	SWItching deficient, subunit of the SWI/SNF chromatin remodeling complex	<i>SMARCC2, SMARCC1</i>
YJL188C	<i>BUD19</i>	BUD site selection, dubious open reading frame	w/o orthologue
YKL009W	<i>MRT4</i>	mRNA Turnover 4, protein involved in mRNA turnover and ribosome assembly	<i>LOC124865</i>
YKL096C-B	unass.	Putative protein of unknown function	w/o orthologue
YKL139W	<i>CTK1</i>	Carboxy-Terminal domain Kinase, catalytic (alpha) subunit of C-terminal domain kinase I (CTDK-I)	<i>CDC2L5, CDK9</i>
YKL163W	<i>PIR3</i>	Protein containing Internal Repeats, o-glycosylated covalently-bound cell wall protein	w/o orthologue
YKR024C	<i>DBP7</i>	Dead Box Protein, putative ATP-dependent RNA helicase of the DEAD-box family	<i>DDX31</i>
YKR095W	<i>MLP1</i>	Myosin-Like Protein, myosin-like protein associated with the nuclear envelope	<i>TPR,LEKRI,GOLGA4,CENPE,CENPF,GOLGB1,</i>
YLL002W	<i>RTT109</i>	Regulator of Ty1 Transposition, histone acetyltransferase	w/o orthologue
YLL013C	<i>PUF3</i>	PUmilio-homology domain Family, protein of the mitochondrial outer surface	<i>PUM2, PUM1</i>
YLL024C	<i>SSA2</i>	Stress-Seventy subfamily A, aTP-binding protein	<i>HSPA8,HSPA1B,HSPA6,HSPA2,HSPA1A,HSPA1L,HSPA5,</i>
YLL043W	<i>FPS1</i>	Fdp1 Suppressor, aquaglyceroporin	<i>AQP3 to 5, AQP7, AQP 7, AQP 9 &amp;10, LOC100509620</i>
YLL046C	<i>RNP1</i>	Ribonucleoprotein that contains two RNA recognition motifs (RRM)	w/o orthologue
YLR015W	<i>BRE2</i>	BREfeldin A sensitivity, subunit of COMPASS (Set1C) complex	<i>ASH2L</i>
YLR046C	unass.	Putative membrane protein	w/o orthologue
YLR047C	<i>FRE8</i>	Protein with sequence similarity to iron/copper reductases	w/o orthologue
YLR048W	<i>RPS0B</i>	Ribosomal Protein of the Small subunit, protein component of the small (40S) ribosomal subunit	<i>RPSAP15</i>
YLR057W	<i>MNL2</i>	MaNnosidase-Like protein, putative mannosidase involved in ER-associated protein degradation	<i>MAN1B1,MAN1C1,MAN1A2,MAN1A1,</i>

YLR061W	<i>RPL22A</i>	Ribosomal Protein of the Large subunit, ribosomal 60S subunit protein L22A	<i>RPL22, RPL22L1</i>
YLR062C	<i>BUD28</i>	BUD site selection, dubious open reading frame	w/o orthologue
YLR063W	<i>BMT6</i>	Base Methyltransferase of Twenty five S rRNA 6, methyltransferase required for m3U2843 methylation of the 25S rRNA	w/o orthologue
YLR072W	<i>LAM6</i>	Lipid transfer protein Anchored at Membrane contact site, protein of unknown function	<i>GRAMD1A, GRAMD1B, GRAMD1C, GRAMD2A</i>
YLR079W	<i>SIC1</i>	Substrate/Subunit Inhibitor of Cyclin-dependent protein kinase, cyclin-dependent kinase inhibitor (CKI)	w/o orthologue
YLR182W	<i>SWI6</i>	SWItching deficient, transcription cofactor	w/o orthologue
YLR322W	<i>VPS65</i>	Vacuolar Protein Sorting, dubious open reading frame	w/o orthologue
YLR369W	<i>SSQ1</i>	Stress-Seventy subfamily Q, mitochondrial hsp70-type molecular chaperone	<i>HSPA9</i>
YLR418C	<i>CDC73</i>	Cell Division Cycle, component of the Paf1p complex	<i>CDC73</i>
YLR433C	<i>CNA1</i>	CalciNeurin A, calcineurin A	<i>PPP3CA, B, C</i>
YML009W-B	unass.	Dubious open reading frame	w/o orthologue
YML012C-A	unass.	Dubious open reading frame	w/o orthologue
YML014W	<i>TRM9</i>	TRna Methyltransferase, tRNA methyltransferase	<i>ALKBH8, TRMT9B</i>
YML024W	<i>RPS17A</i>	Ribosomal Protein of the Small subunit, ribosomal protein 51 (rp51) of the small (40s) subunit	<i>RPS17</i>
YML050W	<i>AIM32</i>	Altered Inheritance rate of Mitochondria, putative protein of unknown function	w/o orthologue
YML061C	<i>PIF1</i>	Petite Integration Frequency, dNA helicase	<i>PIF1</i>
YMR018W	<i>PEX9</i>	Putative protein of unknown function with similarity to human PEX5Rp	<i>PEX5</i>
YMR116C	<i>ASC1</i>	Absence of growth Suppressor of Cyp1, g-protein beta subunit and guanine dissociation inhibitor for Gpa2p	<i>RACK1</i>
YMR179W	<i>SPT21</i>	SuPpressor of Ty, protein with a role in transcriptional silencing	w/o orthologue
YMR198W	<i>CIK1</i>	Chromosome Instability and Karyogamy, kinesin-associated protein	w/o orthologue
YMR222C	<i>FSH2</i>	Family of Serine Hydrolases, putative serine hydrolase that localizes to the cytoplasm	<i>OVCA2, DHFRP1</i>
YMR242W-A	unass.	Putative protein of unknown function	w/o orthologue
YNL022C	<i>RCM1</i>	rRNA m5C methyltransferase	<i>NSUN7</i>
YNL027W	<i>CRZ1</i>	Calcineurin-Responsive Zinc finger, transcription factor	<i>SP3, SP9, KLF10, SP5, SP1, OSR1, KLF17, KLF11, SP6</i>

YNL076W	<i>MKS1</i>	Multicopy Kinase Suppressor, pleiotropic negative transcriptional regulator	w/o orthologue
YNL138W	<i>SRV2</i>	Suppressor of RasVal19, cAP (cyclase-associated protein)	<i>CAP2, CAPI</i>
YNL146W	unass.	Putative protein of unknown function	w/o orthologue
YNL220W	<i>ADE12</i>	adenylsuccinate synthesis; ADENine requiring, catalyzes the first step in synthesis of adenosine monophosphate	<i>ADSSI</i>
YNR052C	<i>POP2</i>	PGK promoter directed OverProduction, rNase of the DEDD superfamily	<i>CNOT8,CNOT7,</i>
YOL045W	<i>PSK2</i>	Pas domain-containing Serine/threonine protein Kinase, pAS-domain containing serine/threonine protein kinase	<i>PIM2,PIM3,</i>
YOL046C	unass.	Dubious open reading frame	w/o orthologue
YOL054W	<i>PSH1</i>	Pob3/Spt16 Histone associated, e3 ubiquitin ligase targeting centromere-binding protein Cse4p	<i>TRIM8,TRIM3,TRIM2, TRIM25,TRIM40,</i>
YOL085C	unass.	Dubious open reading frame	w/o orthologue
YOR113W	<i>AZF1</i>	Asparagine-rich Zinc-Finger, zinc-finger transcription factor	<i>SP1, FEZF2, FEZP1</i>
YOR120W	<i>GCY1</i>	Galactose-inducible Crystallin-like Yeast protein, glycerol dehydrogenase	<i>AKR1B10,AKR1B1,AKR1A1, AKR1D1,AKR1C2,AKR1C1, AKR1E2,AKR1C3,AKR1C4, AKR1B15,</i>
YOR141C	<i>ARP8</i>	Actin-Related Protein, nuclear actin-related protein involved in chromatin remodeling	<i>ACTR8</i>
YOR196C	<i>LIP5</i>	LIPoic acid, protein involved in biosynthesis of the coenzyme lipoic acid	<i>LIAS</i>
YOR301W	<i>RAX1</i>	Protein involved in bud site selection during bipolar budding	<i>AKAP10</i>
YOR309C	unass.	Dubious open reading frame	w/o orthologue
YOR312C	<i>RPL20B</i>	Ribosomal Protein of the Large subunit, ribosomal 60S subunit protein L20B	<i>RPL18A</i>
YPL008W	<i>CHL1</i>	CHromosome Loss, probable DNA helicase	<i>TNFRSF6B, BRIP1</i>
YPL098C	<i>MGR2</i>	Mitochondrial Genome Required, subunit of the TIM23 translocase complex	<i>ROMO1</i>
YPL106C	<i>SSE1</i>	ATPase component of heat shock protein Hsp90 chaperone complex	<i>HYOU1,HSPA4L,HSPA4,</i>
YPL145C	<i>KES1</i>	KrE11-1 Suppressor, one of seven members of the yeast oxysterol binding protein family	<i>OSBPL9, OSBPL11, OSBPL10, OSBPL8, OSBPL5</i>
YPL174C	<i>NIP100</i>	Nuclear ImPort, large subunit of the dynactin complex	<i>CLIP3,CLIP2,CLIP4,CLIP1, CEP350,</i>
YPL178W	<i>CBC2</i>	Cap Binding Complex, small subunit of the heterodimeric cap binding complex with Sto1p	<i>NCBP2</i>

YPL240C	<i>HSP82</i>	Heat Shock Protein, hsp90 chaperone	<i>HSP90AA1</i>
YPR043W	<i>RPL43A</i>	Ribosomal Protein of the Large subunit, ribosomal 60S subunit protein L43A	<i>RPL37A</i>
YPR057W	<i>BRR1</i>	Bad Response to Refrigeration, snRNP protein component of spliceosomal snRNPs	w/o orthologue
YPR096C	unass.	Protein of unknown function	w/o orthologue
YPR159C-A	unass.	Protein of unknown function	w/o orthologue
YPR159W	<i>KRE6</i>	Killer toxin REsistant, type II integral membrane protein	w/o orthologue

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*unass.* = *unassigned*

*w/o orthologue* = *without mammalian orthologue*