

Supplementary Table 1

	SGD ID	Systematic Name	Standard Name	Protein	Description
1	S000004334	YLR342W	FKS1	1,3-beta-D-glucan synthase	Catalytic subunit of 1,3-beta-D-glucan synthase, functionally redundant with alternate catalytic subunit Gsc2p; binds to regulatory subunit Rho1p; involved in cell wall synthesis and maintenance; localizes to sites of cell wall remodeling
2	S000001073	YHR031C	RRM3	DNA helicase	involved in rDNA replication and Ty1 transposition; DNA helicase
3	S000005215	YNL271C	BN11	formin, involved in spindle orientation	Formin, nucleates the formation of linear actin filaments, involved in cell processes such as budding and mitotic spindle orientation which require the formation of polarized actin cables, functionally redundant with BNR1
4	S000005366	YOL006C	TOP1	topoisomerase I	topoisomerase I
5	S000004924	YMR307W	GAS1	cell surface glycoprotein 115-120 kDa	Beta-1.3-glucanosyltransferase, required for cell wall assembly; localizes to the cell surface via a glycosylphosphatidylinositol (GPI) anchor
6	S000005596	YOR070C	GYP1	GTPase activating protein (GAP)	Cis-golgi GTPase-activating protein (GAP) for the Rab family members Ypt1p (in vivo) and for Ypt1p, Sec4p, Ypt7p, and Ypt51p (in vitro); involved in vesicle docking and fusion
7	S000004219	YLR229C	CDC42	Rho subfamily of Ras-like proteins	Small rho-like GTPase, essential for establishment and maintenance of cell polarity; mutants have defects in the organization of actin and septins
8	S000003567	YJL030W	MAD2	spindle checkpoint complex subunit	Component of the spindle-assembly checkpoint complex, which delays the onset of anaphase in cells with defects in mitotic spindle assembly; forms a complex with Mad1p
9	S000004876	YMR263W	SAP30		Subunit of a histone deacetylase complex, along with Rpd3p and Sin3p, that is involved in silencing at telomeres, rDNA, and silent mating-type loci
10	S000000809	YER007W	PAC2	tubulin folding cofactor E	Microtubule effector required for tubulin heterodimer formation, binds alpha-tubulin, required for normal microtubule function, null mutant exhibits cold-sensitive microtubules and sensitivity to benomyl
11	S000005242	YNL298W	CLA4	Ste20p homolog protein kinase	Involved in localizing cell growth with respect to the septin ring; protein kinase, homologous to Ste20p, interacts with CDC42
12	S000004802	YMR190C	SGS1		Nucleolar DNA helicase of the RecQ family, involved in maintenance of genome integrity; has similarity to human BLM and WRN helicases implicated in Bloom and Werner syndromes
13	S000000602	YCR009C	RVS161		BAR adaptor protein, subunit of a complex (Rvs161p, Rvs167p) that regulates actin, endocytosis, and viability following starvation or osmotic stress
14	S000005042	YNL098C	RAS2	small GTP-binding protein	GTP-binding protein involved in growth on nonfermentable carbon sources, the starvation response, sporulation, pseudohyphal growth, and aging; homolog of Ras proto-oncogenes
15	S000005266	YNL322C	KRE1		Cell wall glycoprotein involved in beta-glucan assembly; serves as a K1 killer toxin membrane receptor
16	S000005551	YOR025W	HST3		Member of the Sir2 family of NAD(+)-dependent protein deacetylases; involved along with Hst4p in telomeric silencing, cell cycle progression, radiation resistance, genomic stability and short-chain fatty acid metabolism

17	S000004103	YLR113W	HOG1	MAP kinase	Mitogen-activated protein kinase involved in osmoregulation via three independent osmosensors; mediates the recruitment and activation of RNA Pol II at Hot1p-dependent promoters; localization regulated by Ptp2p and Ptp3p
18	S000004908	YMR294W	JNM1		Component of the yeast dynactin complex, consisting of Nip100p, Jnm1p, and Arp1p; required for proper nuclear migration and spindle partitioning during mitotic anaphase B