

The foundation for much of our understanding of basic cellular biology has been learned from the budding yeast *Saccharomyces cerevisiae*. Studies with yeast have also provided powerful insights into human genetic diseases and the cellular pathways in which they are involved. Here we present an update on new developments at the *Saccharomyces* Genome Database (SGD; <http://www.yeastgenome.org/>), the premier community resource for budding yeast. We are expanding the scope of SGD to include high quality manually curated information regarding functional complementation between yeast and human homologs. This new information is provided in meaningful ways allowing data mining and discovery by integrating these data into this encyclopedic online resource. In addition to introducing our presentation of these newly curated data we will highlight other new developments, such as written summaries about yeast genes and their mutant phenotypes, their human homolog disease associations, and presentation of the yeast/human ortholog set. We also associate sequence changes with variations in cellular phenotypes and protein function. SGD maintains these different datatypes, and distributes them to the scientific community via the web and file transfer. These expanded efforts are part of our continuing mission to educate students, enable bench researchers and facilitate scientific discovery. This work is supported by a grant from the NHGRI (U41 HG001315).

Yeast and human homologs • Alleles and phenotype variants • Functional complementation • Disease associations

Gene	Human gene	OMIM ID	Complementation
ACO1	ACO2	100850	human → yeast
AFG3	AFG3L2	604581	human → yeast
AGC1	SLC25A13	603859	human → yeast
AGX1	AGXT	604285	human → yeast
AKR1	ZDHHC15	300576	human → yeast
AKR1	ZDHHC17	607799	human → yeast
AKR1	ZDHHC21	614605	human → yeast
AKR1	ZDHHC3	614586	human → yeast
AKR1	ZDHHC7	614604	human → yeast
AKR1	ZDHHC8	608784	human → yeast
AKR1	ZDHHC9	300646	human → yeast
ALA1	AARS	601065	human → yeast
ALG1	ALG1	605907	human → yeast
ALG12	ALG12	607144	human → yeast
ALG3	ALG3	608750	human → yeast
ALG5	ALG5	604565	human → yeast
ALG6	ALG6	604566	human → yeast
ALG8	ALG8	608103	human → yeast
ALG9	ALG9	606941	human → yeast
ALT1	MAGT1	614586	human → yeast
ALR1	TUSC3	601385	human → yeast
ARD1	NAA10	300013	human → yeast
ATM1	ABCB7	300135	human → yeast
ATP12	ATPAF2	608918	human → yeast
BTES	BCS1L	603647	human → yeast
BETS	TRAPPAC1	610969	human → yeast
CAR2	OAT	613349	human → yeast
CCAL	TRH1	612907	human → yeast
CCCL	ATP7A	300011	human → yeast
CCC2	ATP7B	606882	human → yeast
CCS1	CCS	603864	human → yeast
CD48	WCP	610123	human → yeast
CIN2	RP2	300757	human → yeast
COQ2	COQ2	609825	human → yeast
COQ6	COQ6	614647	human → yeast
COQ8	ADCK3	606980	human → yeast
COQ9	COQ9	612837	human → yeast
COWA	COX10	602125	human → yeast
COX17	COX17	604313	human → yeast
CRC1	SLC25A20	604515	human → yeast
CUC5	TOLLIP	606277	human → yeast
CVE3	HCCS	300056	human → yeast
CYS4	CBS	608531	human → yeast
CD48	SROA3	612715	human → yeast
ERG26	NSDHL	270275	human → yeast
ESS1	PIN1	601052	human → yeast
FLD1	BSCL2	606158	human → yeast
FLX1	SLC25A32	610815	human → yeast
FOL2	GCH1	600225	human → yeast
GALL1	GALK2	137028	human → yeast
GALL10	GALE	606953	human → yeast
GD11	TMEM165	614726	human → yeast
GEL1	CAMLG	601118	human → yeast
GET1	WRB	602915	human → yeast
GET2	CAMLG	601118	human → yeast
GET3	WRB	602915	human → yeast
GRS1	GARS	600287	human → yeast
HAM1	ITPA	147520	yeast → human
HMG1	HMGCR	142910	human → yeast
HRT1	RXB1	603814	human → yeast
HRT1	RXB1	603814	human → yeast
HUB1	UBL5	606849	human → yeast
IRAI	NF1	613113	human → yeast
IRB2	NF1	613113	human → yeast
ISM1	IARS2	612801	human → yeast
ISU1	ISCU	611911	human → yeast
ISU2	ISCU	611911	human → yeast
LAS17	WAS	600392	human → yeast
LEU5	SLC25A16	139080	human → yeast
LPD1	DLD	238331	human → yeast
MDM38	LETM1	604407	human → yeast
MEP1	RHC6	605381	human → yeast
MET14	PAPSS2	603005	human → yeast
MET22	BPN1T	604053	human → yeast
MET3	PAPSS2	603005	human → yeast
MH1	POLG	174763	human → yeast
MH1	MU1H	120436	human → yeast
MNL1	EDEM1	607673	human → yeast
MSB1	USP6N	605405	human → yeast
MSB3	USP6N	605405	human → yeast
MSB4	USP6N	605405	human → yeast
MTO1	MTO1	614667	human → yeast
NAM2	LARS2	604544	human → yeast
NAT1	NAA15	608000	human → yeast
NCR1	NP1	607623	yeast → human
ND1	MT-ND4	516003	yeast → human
NPC1	NPC2	610155	yeast → human
NUS1	NUS1	610463	human → yeast
PAH1	PAH1	605518	human → yeast
PAH2	PAH2	605519	human → yeast
PAH3	PAH3	605520	human → yeast
PKC1	PKC1	614168	human → yeast
PET9	SLC25A4	103220	human → yeast
PEX13	PEX13	601789	human → yeast
PFY1	PFN1	176610	human → yeast
PHO8D	CDK5	123831	human → yeast
PHO92	YTHDF2	610640	human → yeast
PMR1	ATP2C1	604384	human → yeast
PMS1	PMS1	600258	human → yeast
PUT2	ALDH4A1	606811	human → yeast
PXA1	ABCD1	600381	human → yeast
PXA2	ABCD1	600381	human → yeast

 @yeastgenome