

Network	Element	Dis(v)	Knockout effect	References
E.coli	crp	0.1553	slow-growth phenotype	43
E.coli	fnr	0.0527	phenotypically silent	43
E.coli	himA	0.0541	defective in phage lambda integration	44
E.coli	rpoE_rseABC	0.0471	enhanced expression of the superoxide sensor SoxR	45
E.coli	arcA	0.0499	increased aerobic TCA cycle activity	43
Yeast	REB1	0.0532	inviable; lethal	25, 46
Yeast	UME6	0.0487	viable; growth rate abnormal; lethal	25, 27, 47, 48, 50
Yeast	MIG1	0.0474	viable; altered genetic expression; Lag phase growth abnormal	25, 50, 51
Yeast	STE12	0.0461	viable; growth rate abnormal; filamentous growth abnormal	25, 52, 53
Yeast	IME1	0.1110	defective meiosis	54
Yeast	RME1	0.0838	viable; invasive growth abnormal; sexual sporulation abnormal	25, 55, 56
Yeast	SNF2/SWI2	0.0747	defective meiosis; growth rate abnormal; recombination defective	82, 83, 84
Yeast	SWI5	0.0629	viable; sodium sensitive; altered sensitivity to drugs or other compounds	25, 57
Yeast	MCM1	0.0643	inviable; lethal	25, 58
Yeast	SIN3	0.0610	viable; sexual sporulation abnormal; altered sensitivity to drugs or other compounds	25, 59, 60, 61
TLR4	Myt1	0.0408	inviable; Myt1(-/-) animals die postnatally	62
TLR4	Cdk1	0.0381	inviable	63, 64
TLR4	p53	0.0303	inviable	65, 66, 67
TLR4	Caspase3	0.0325	inviable	68, 69
TLR4	ERK2	0.0324	embryo-fetus inviable	70
TLR4	beta1-integrin	0.0295	embryo-fetus inviable	71, 72, 73, 74, 75
TLR4	Lyn	0.0285	Lyn-/- B cells are hyper-responsive to transmembrane signals; high levels of autoantibody production and glomerulonephritis	76, 77
TLR4	betaARK-1	0.0277	embryo-fetus inviable; neonate inviable	78, 79, 80
TLR4	Caspase9	0.0279	inviable	68, 69
TLR4	Grb-2	0.0262	neonate inviable	81

Table 1: Gene knockouts and their biological effects

References

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