

**Table S5. Top genes enriched in “In Gfp<sup>++</sup>” population.**

Shaded *sub1* mutant was identified in this study as having higher basal *pFUS1*-GFP reporter expression (data from a single experiment).

Systematic Name	Common Name	Log2 Fold Change	padj	Individually Tested Phenotype	Newly Made Mutant Phenotype
YLL047W	YLL047W	1.807	2.36E-44	Wild-type	
YJR019C	TES1	1.743	1.09E-26	Lower basal	Wild-type
YOR378W	YOR378W	1.462	1.42E-28	Wild-type	
YGR206W	MVB12	1.399	9.04E-12	Wild-type	
YNL049C	SFB2	1.389	8.84E-11	Wild-type	
YER106W	MAM1	1.333	9.98E-07	Wild-type	
<b>YMR039C</b>	<b>SUB1</b>	<b>1.284</b>	<b>6.42E-05</b>	<b>Higher basal</b>	<b>Higher basal</b>
YBL063W	KIP1	1.268	2.25E-21	Wild-type	
YDR391C	YDR391C	1.225	2.70E-12		
YFL012W	YFL012W	1.205	3.79E-06	Wild-type	
YAL007C	ERP2	1.201	2.86E-09	Wild-type	
YBR016W	YBR016W	1.200	7.45E-06		
YMR026C	PEX12	1.182	0.0333	Wild-type	
YML081W	TDA9	1.179	2.27E-05		
YMR011W	HXT2	1.178	0.0005	Wild-type	
YAR047C	YAR047C	1.174	1.18E-09	Wild-type	
YLR018C	POM34	1.170	0.0069	Wild-type	
YML037C	YML037C	1.168	2.49E-08	Wild-type	
YIR028W	DAL4	1.161	0.0008		
YAL055W	PEX22	1.159	1.21E-05	Wild-type	
YML058C-A	YML058C-A	1.156	1.19E-10	Wild-type	
YNL146W	YNL146W	1.152	4.24E-05	Gfp <sup>-</sup> ; no induction	Wild-type
YKL197C	PEX1	1.144	1.73E-05		
YNL305C	BXI1	1.142	1.42E-05	Wild-type	