

Additional File 33. Kinases presented in at least one yeast species and with no orthologous genes in other eukaryotes. Yeast species analyzed: *P. pastoris* (Picpa1), *S. cerevisiae* (Sacce1, SacceM3707_1) and/or *S. pombe* (Schpo1). Systematic name and description of kinase function refer to *S. cerevisiae* Sacce1.

| Cluster | Picpa1 | Sacce1 | Sacce M3707_1 | Schpo1 | Systematic Name | Description |
|-------------------|--------|--------|------------------|--------|--------------------|--|
| FungiJGICTBE22669 | 0 | 1 | 1 | 0 | YPL026C | Suppressor Kinase of SNF3 |
| FungiJGICTBE23938 | 0 | 1 | 1 | 0 | YDR466W | Pkb-activating Kinase Homolog |
| FungiJGICTBE23984 | 0 | 1 | 1 | 0 | YIL095W | p53 Regulatory Kinase |
| FungiJGICTBE23997 | 0 | 1 | 1 | 0 | YIL035C | Casein Kinase Alpha subunit |
| FungiJGICTBE24081 | 0 | 1 | 1 | 0 | YER123W | Yeast Casein Kinase |
| FungiJGICTBE24161 | 0 | 1 | 1 | 0 | YGL158W | Radiation sensitivity Complementing Kinase |
| FungiJGICTBE24216 | 0 | 1 | 1 | 0 | YGR052W | Found in Mitochondrial Proteome |
| FungiJGICTBE24312 | 0 | 1 | 1 | 0 | YHR082C | Kinase Suppressing Prp20-10 |
| FungiJGICTBE24315 | 0 | 1 | 1 | 0 | YBR059C | Ark family Kinase-Like protein |
| FungiJGICTBE24364 | 0 | 1 | 1 | 0 | YJL165C | HALotolerance |
| FungiJGICTBE24442 | 0 | 1 | 1 | 0 | YKL168C | |
| FungiJGICTBE24445 | 0 | 1 | 1 | 0 | YKL161C | Kinase Dead X-talker |
| FungiJGICTBE24459 | 0 | 1 | 1 | 0 | YKL101W | Histone Synthetic Lethal |
| FungiJGICTBE24480 | 0 | 1 | 1 | 0 | YKL048C | ELongated Morphology |
| FungiJGICTBE24796 | 0 | 1 | 1 | 0 | YMR291W | Topoisomerase I Damage Affected |
| FungiJGICTBE24919 | 0 | 1 | 1 | 0 | YOL128C | Yeast homolog of Glycogen synthase Kinase |
| FungiJGICTBE24928 | 0 | 1 | 1 | 0 | YOL100W | Pkb-activating Kinase Homolog |
| FungiJGICTBE25222 | 0 | 1 | 1 | 0 | YDL214C | Pheromone Response Regulator |

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|-------------------|---|---|---|---|---------------------|---|
| FungiJGICTBE25245 | 0 | 1 | 1 | 0 | YAR019C | Cell Division Cycle |
| FungiJGICTBE25246 | 0 | 1 | 1 | 0 | YDL079C | Mds1p Related Kinase |
| FungiJGICTBE12570 | 1 | 2 | 2 | 0 | YOR233W, YPL141C | KINase, Fatty acyl-CoA synthetase and RNA processing-associated Kinase |
| FungiJGICTBE12571 | 1 | 2 | 2 | 0 | YDR507C, YCL024W | Growth Inhibitory |
| FungiJGICTBE13605 | 0 | 2 | 2 | 0 | YJR059W, YKL198C | Putative serine/Threonine protein Kinase |
| FungiJGICTBE14077 | 1 | 1 | 1 | 1 | YMR001C | Cell Division Cycle |
| FungiJGICTBE15775 | 1 | 1 | 1 | 0 | YPR106W | Inhibition of Staurosporine Resistance |
| FungiJGICTBE16796 | 1 | 1 | 1 | 0 | YDL025C | Ribosome biogenesis and TRNA synthetase- associated Kinase |
| FungiJGICTBE17172 | 1 | 1 | 1 | 0 | YFL029C | Cdk-Activating Kinase |
| FungiJGICTBE17365 | 1 | 1 | 1 | 0 | YKL171W | Nitrogen Network Kinase |
| FungiJGICTBE17408 | 1 | 1 | 1 | 0 | YPR054W | |
| FungiJGICTBE17449 | 1 | 1 | 1 | 0 | YHR102W | Kinase that Interacts with Cdc31p |
| FungiJGICTBE17505 | 1 | 1 | 1 | 0 | YNL307C | Meiosis and Centromere regulatory Kinase |
