

Text S5. Description of the Yap family in yeast species *S. cerevisiae*, *C. glabrata* and *C. albicans*.

To identify the members of the Yap family in each yeast species, we used a general strategy comparable to this presented in [1]. Results obtained in *C. glabrata* and *C. albicans* were also manually inspected. In *C. glabrata* seven members were identified, whereas in *C. albicans* only 4 members were found (see below). This lower number of AP-1 transcription factors in *C. albicans* is connected to the whole genome duplication that arose in the common history of *S. cerevisiae* and *C. glabrata*, but not in the *C. albicans* ancestors.

Gene name	Description
<i>Saccharomyces cerevisiae</i>	
YML007W YAP1	Basic leucine zipper (bZIP) transcription factor required for oxidative stress tolerance; activated by H ₂ O ₂ through the multistep formation of disulfide bonds and transit from the cytoplasm to the nucleus; mediates resistance to cadmium
YDR423C YAP2	AP-1-like basic leucine zipper (bZIP) transcriptional activator involved in stress responses, iron metabolism, and pleiotropic drug resistance; controls a set of genes involved in stabilizing proteins; binds consensus sequence TTACTAA
YHL009C YAP3	Basic leucine zipper (bZIP) transcription factor
YOR028C YAP4	Basic leucine zipper (bZIP) transcription factor of the yAP-1 family, mediates pleiotropic drug resistance and salt tolerance; nuclearly localized under oxidative stress and sequestered in the cytoplasm by Lot6p under reducing conditions
YIR018W YAP5	Basic leucine zipper (bZIP) transcription factor
YDR259C YAP6	Putative basic leucine zipper (bZIP) transcription factor; overexpression increases sodium and lithium tolerance; computational analysis suggests a role in regulation of expression of genes involved in carbohydrate metabolism
YOL028C YAP7	Putative basic leucine zipper (bZIP) transcription factor
YPR199C YAP8	Transcriptional activator of the basic leucine zipper (bZIP) family, required for transcription of genes involved in resistance to arsenic compounds
<i>Candida glabrata</i>	
CAGL0H04631g	similar to uniprot P19880 <i>Saccharomyces cerevisiae</i> YML007w YAP1 (ohnolog of YDR423C) Basic leucine zipper (bZIP) transcription factor required for oxidative stress tolerance

CAGL0F03069g	some similarities with uniprot P24813 <i>Saccharomyces cerevisiae</i> YDR423c CAD1 (ohnolog of YML007W) AP-1-like basic leucine zipper (bZIP) transcriptional activator involved in stress responses, iron metabolism, and pleiotropic drug resistance
CAGL0K02585g	some similarities with uniprot P38749 <i>Saccharomyces cerevisiae</i> YHL009c YAP3 Basic leucine zipper (bZIP) transcription factor
CAGL0M10087g	some similarities with uniprot P38749 <i>Saccharomyces cerevisiae</i> YHL009c YAP3 Basic leucine zipper (bZIP) transcription factor
CAGL0M08800g	weakly similar to uniprot Q03935 <i>Saccharomyces cerevisiae</i> YDR259c YAP6 (ohnolog of YOR028C) Putative basic leucine zipper (bZIP) transcription factor
CAGL0F01265g	some similarities with uniprot Q08182 <i>Saccharomyces cerevisiae</i> YOL028c YAP7 (ohnolog of YIR018W) Putative basic leucine zipper (bZIP) transcription factor
CAGL0K08756g	weakly similar to uniprot P40574 <i>Saccharomyces cerevisiae</i> YIR018w YAP5 (ohnolog of YOL028C) Basic leucine zipper (bZIP) transcription factor
<i>Candida albicans</i>	
orf19.1623 CAP1	Transcription factor, AP-1 family; role in oxidative stress response and resistance, multidrug resistance; oxidative stress regulates nuclear localization; partially complements <i>S. cerevisiae</i> yap1 mutation; human neutrophil-induced
orf19.3193 FCR3	Transcriptional regulator of the bZip family; partially functionally complements the fluconazole sensitivity of an <i>S. cerevisiae</i> pdr1 pdr3 double mutant; probable ortholog of <i>S. cerevisiae</i> Yap3p
orf19.681 HAP43	CCAAT-binding factor (CBF)-dependent transcription factor required for iron-limitation response; similar to transcription factor AP-1; transcription is negatively regulated by Sfu1p; ciclopirox olamine induced
orf19.861	Predicted transcriptional regulator with bZip domain; possibly an essential gene, disruptants not obtained by UAU1 metho

Gene descriptions were obtained from the following websites : SGD <http://www.yeastgenome.org/> (for *S. cerevisiae*), Genolevures <http://www.genolevures.org/> (for *C. glabrata*) and CGD <http://www.candidagenome.org/> (for *C. albicans*).

Reference

1. Fernandes, L., C. Rodrigues-Pousada, and K. Struhl, *Yap, a novel family of eight bZIP proteins in Saccharomyces cerevisiae with distinct biological functions*. Mol Cell Biol, 1997. **17**(12): p. 6982-93.