BMH2 is one of two genes in yeast that show strong similarity to the ubiquitous and highly conserved 14-3-3 gene family. The function of 14-3-3 proteins is not well understood, but they may play a role in signal transduction. Although cells lacking BMH2 are viable, a double deletion of both BMH2 and its paralog BMH1 is lethal. Cells lacking BMH1 and BMH2 can be rescued by expression of 14-3-3 proteins from Arabidopsis thaliana or Dictyostelium discoideum. Bmh1p and Bmh2p are required for Ras/MAPK cascade signaling during pseudohyphal growth, and associate with Ste20p in vivo. There is also evidence that Bmh2p may interact with clathrin, suppress mutations in CDC25, interact with Tpk1p, and suppress growth inhibition by rapamycin.