BMH1 is one of two genes in yeast that show strong similarity to the ubiquitous and highly conserved 14-3-3 gene family. 14-3-3 proteins are acidic dimeric molecules that likely play a role in signal transduction. Although cells lacking BMH1 are viable, a double deletion of both BMH1 and its paralog BMH2 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 Bmh1p may enhance Raf function, interact with clathrin, suppress mutations in CDC25, interact with Tpk1p, and suppress growth inhibition by rapamycin.