**Data S1:** Raw data of the putative hits from the replicate yeast screens

**Data S2**: Complete candidate gene list from yeast sceens

**Supplemental Data S3**. Serial tenfold dilutions of indicated 41 yeast strains harboring either an empty vector, a plasmid expressing MELK, or a plasmid expressing MELK-kd spotted onto YP medium plates containing either glucose or galactose.