**Supplementary Experimental Procedures**

**Additional yeast strains**

YMS819 and YMS820 were created using a strain expressing Mep2 fused to GFP (taken from the GFP library) either in *WT* or *Δerv14*backgroundsand replacing its endogenous promoter with the *GALS* galactose-induced promoter (a weaker derivative of the *GAL1* promoter (Mumberg *et al*, 1994)), using pYM-N31 (Janke *et al*, 2004) as a template. YMS1001, YMS1005, YMS1006 and YMS1010 were created by N-terminally fusing GFP, whose expression is driven by the *GPD* promoter, to the ORF of *CPS1* or *TNA1*, both in *WT* or *Δerv14* (YMS792) background, with pYM-N17 (Janke *et al*, 2004) as a template. To check for N-terminal alterations, a primer upstream of the ATG was used in combination with a reverse complement primer of the first 20 bases in the recombination amplicon. For a complete list of primers used see Supplementary Table III.

**Immunoprecipitation and Mass Spectrometry Experiments**

For immunoprecipitation of Erv14-HA, microsome volume corresponding to 500μg total membrane protein was solubilized in 200 μl 15mM Tris, pH 7.5, 50mM NaCl, 1mM PMSF, 2% digitonin at 4°C for 30 min followed by centrifugation at 10,000g for 5 min at 4°C to remove unsolubilized material. Solubilized material was immunoprecipitated by transferring supernatant to a fresh tube containing 50 μl anti-HA agarose beads (Sigma-Aldrich) pre-washed three times in same buffer. After binding for 60 min at 4°C, beads with bound protein were washed a total of three times with 800 μl of same buffer without Digitonin. Finally, bound protein was released from beads by addition of 50 μl of same buffer with 250 μg/ml HA peptide (Sigma-Aldrich) followed by shaking 15 min 1400rpm at 37°c. Eluate was then loaded and separated on a 16% Tris-Tricine polyacrylamide gel. Whole lanes were subsequently sent for Mass Spectrometry analysis, where proteins were Trypsinized and analyzed by LC-MS/MS on the Orbitrap (Thermo) mass spectrometer and identified by Sequest 3.31 software against the yeast part of the nr database.

**References to Supplementary Materials**

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