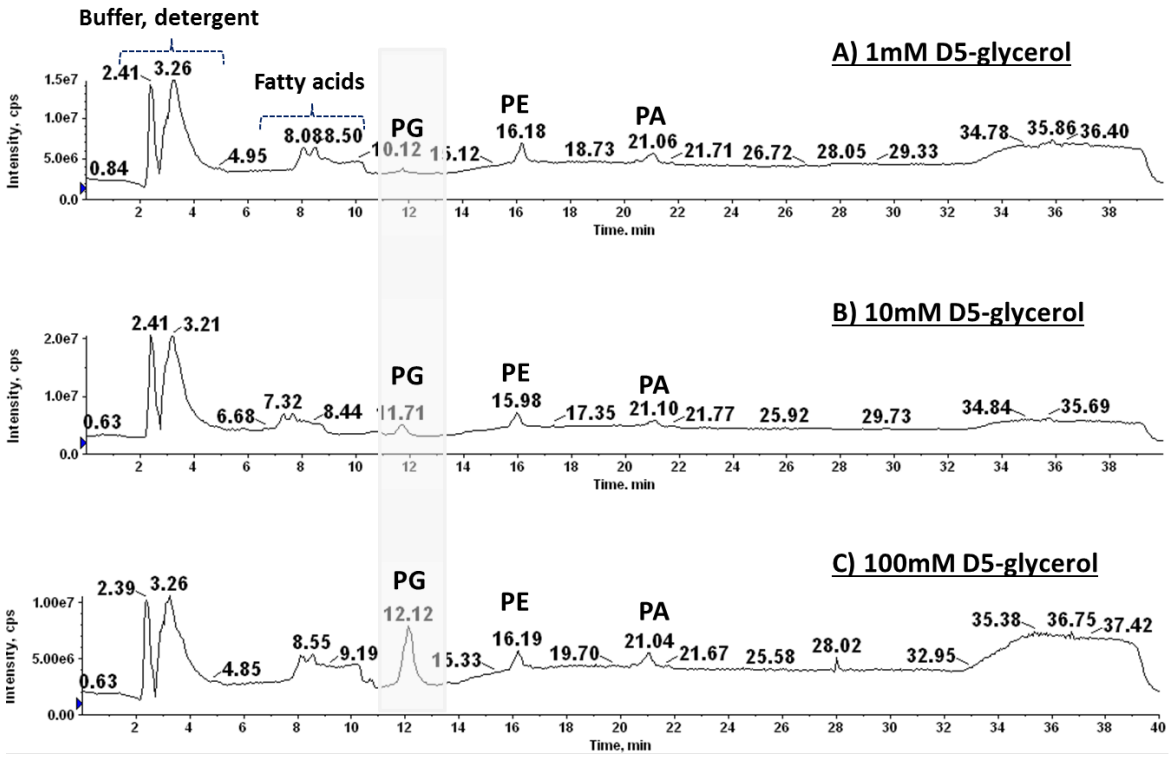

FIGURE 1S. LC/MS analysis of *in vitro* synthesis of PG using glycerol as a substrate. ClsB-expressing BKT29 membranes were incubated with d_5-glycerol at various concentrations: A) 1 mM d_5-glycerol; B) 10 mM d_5-glycerol; C) 100 mM d_5-glycerol. The level of PG increases (almost linearly) with the d_5-glycerol concentration. In comparison, PA remains about the same while PE is slightly decreased. Note: due to the differences in ionization efficiency, the ion intensities of PG, PE and PA cannot be used to estimate their relative quantities.

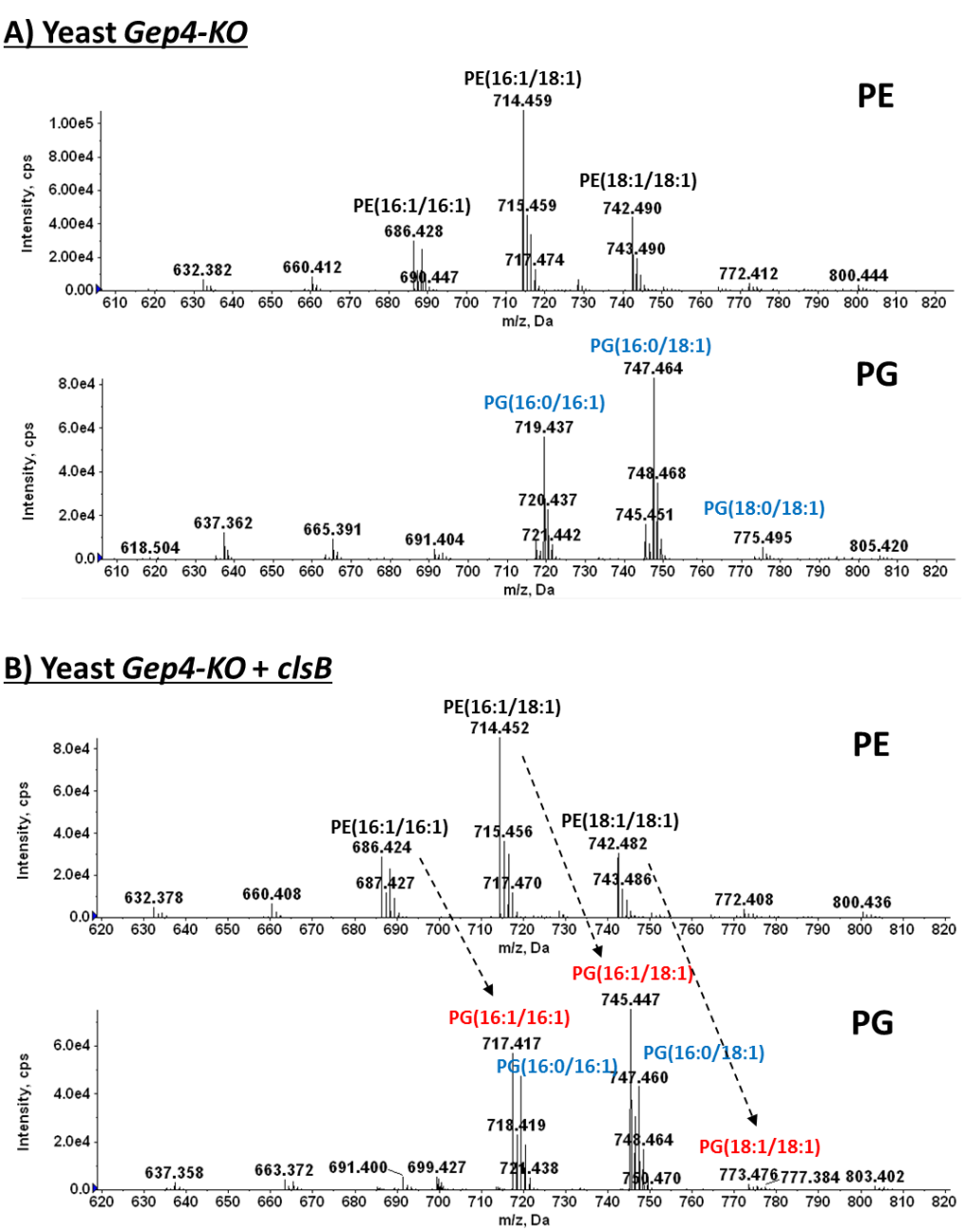

FIGURE 2S. Expression of ClsB converts PE into PG in yeast cells. A) The molecular species of PE and PG in the Gep4 knockout mutant and wild-type (data not shown) yeast cells have different acyl chain compositions. For example, the most abundant PE species, PE (16:1/18:1) at *m/z* 714.459, has two mono-unsaturated acyl chains, while the most abundant PG, PG (16:0/18:1) at *m/z* 747.464, contains only one mono-unsaturated acyl chain. The acyl compositions of PE and PG in wild-type yeast cells are very similar to those in the Gep4 knockout mutant. B) Expression of ClsB in the Gep4 knockout mutant produces new PG molecular species (with red labels) with the same acyl compositions as the most abundant PE species, indicating the PE-to PG conversion by clsB. The CL level is significantly increased upon clsB expression (data not shown).