Supplemental Fig. 1. FTICR analysis of Rpl42ab derived from wild type (BY4742),  $\Delta$ Ybr030w,  $\Delta$ SET7, and the double knockout  $\Delta$ Ybr030w  $\Delta$ SET7 strains. We show here the 15+ ion profile of intact Rpl42ab demonstrating unmodified forms (0Me), monomethylation (1Me) and dimethylation (2Me).

Supplemental Fig. 2. Electron capture dissociation spectrum of the c43 fragment (containing Lys-40) produced from wild type monomethylated Rpl42ab. The +6 c43 fragment ion containing three <sup>13</sup>C atoms is labelled for the unmodified (816.96) and the monomethylated (819.29) m/z peaks. The ion intensities of the two species provide an estimate of the relative level of monomethylated Rpl42ab at Lys-55 (m/z = 816.96) and monomethylated Rpl42ab at Lys-40 (m/z = 819.29).



