



Figure S1. Growth properties of select mutants. (A) Correlation between full experimental repeat for amino acids 40-48 across all measurements. (B) EMPIRIC measurements of stop codons and WT synonyms in each region. Error bars indicate standard deviation (N=22-29 for stop codons; N=16-34 for WT synonyms). (C) Growth rate in monoculture measured by changes in optical density over time. SUB328 cells harboring ubiquitin variants on 417GPD plasmids were pre-grown in shutoff conditions for 16 hours, and then monitored for the following 12 hours in shutoff conditions. A total of 17 point mutants were analyzed as well as