



**S5 Fig. *fat-6;fat-7* Double Mutants Verify the Role of SCDs in Fatty Acid Replacement.**

To corroborate the decreased fatty acid incorporation seen after *fat-7* RNAi treatment, we measured the amount of new fatty acids found in the phospholipid population of SCD mutant animals. Mutations in the *fat-6* or the *fat-7* desaturase have been shown to compensate for each other, and, because the RNAi against *fat-7* also targets *fat-6*, we analyzed *fat-6(tm331);fat-7(wa36)* animals. These animals have very limited progeny production, and, therefore, we used fertile animals with very minimal larval contamination. There is significant developmental delay in *fat-6;fat-7* nematodes, and there is not complete synchrony in the populations when assessed at day 3 of adulthood. Despite the technical challenges, the *fat-6;fat-7* animals (purple) show significantly reduced fatty acid turnover in phospholipids when compared to *fem-15;fer-1* control animals (black), similar to our observations with *fat-7* RNAi. Numbers shown represent the mean  $\pm$  SEM, n=6. Unpaired t-tests established significance (\* $p$ <0.05, \*\* $p$ <0.01, \*\*\* $p$ <0.001).