Supplementary Information Yang et al.

Multidimensional proteomics identifies declines in protein homeostasis and mitochondria as early signals for normal aging and age-associated disease in *Drosophila*

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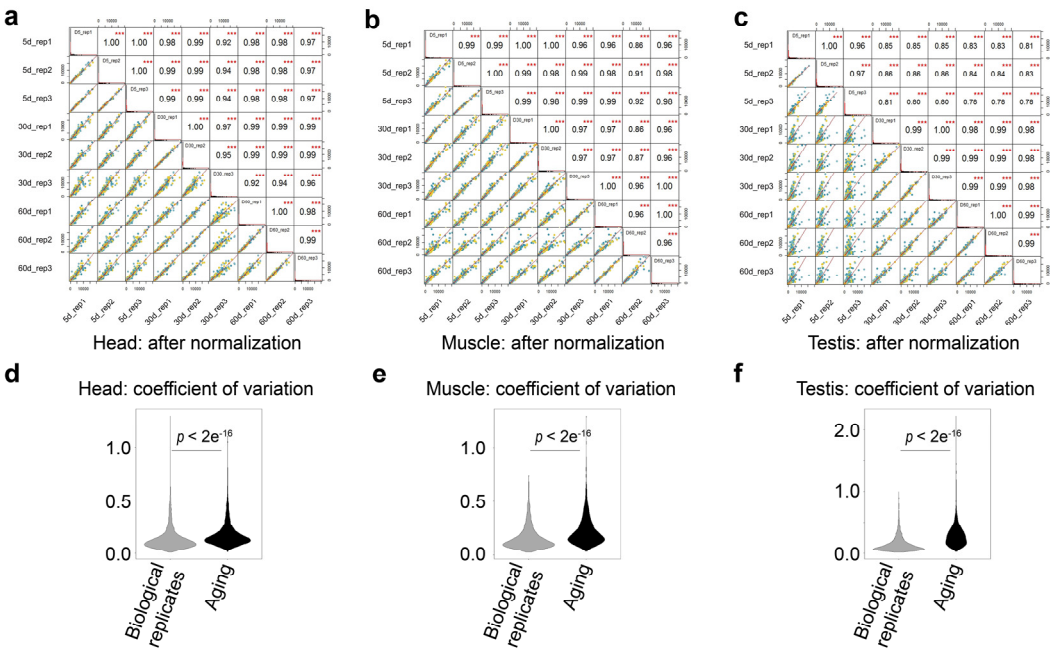
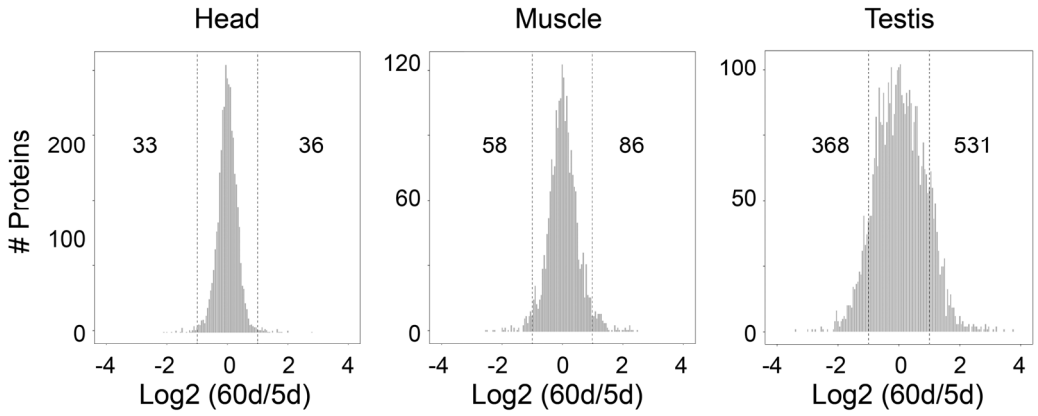
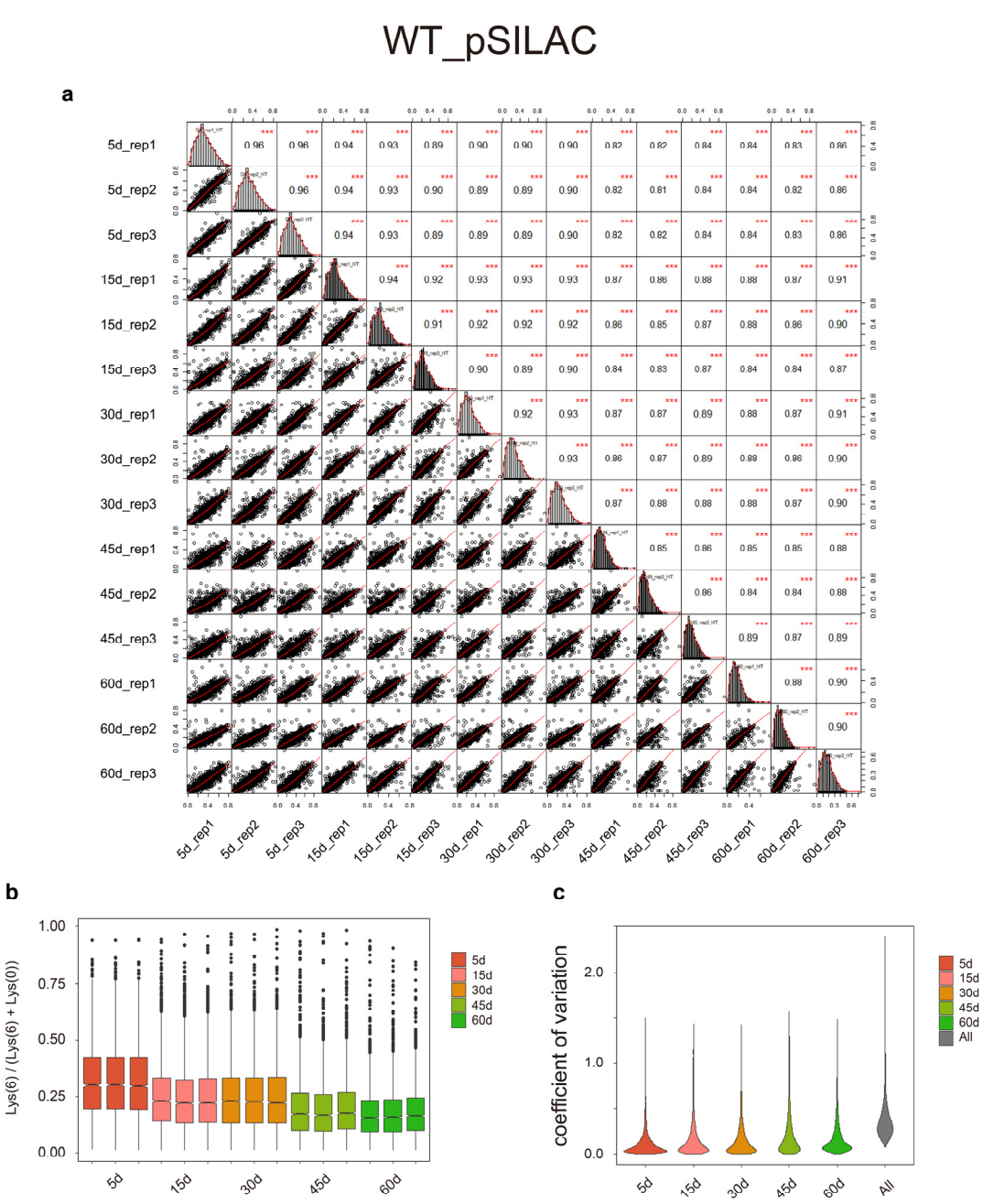


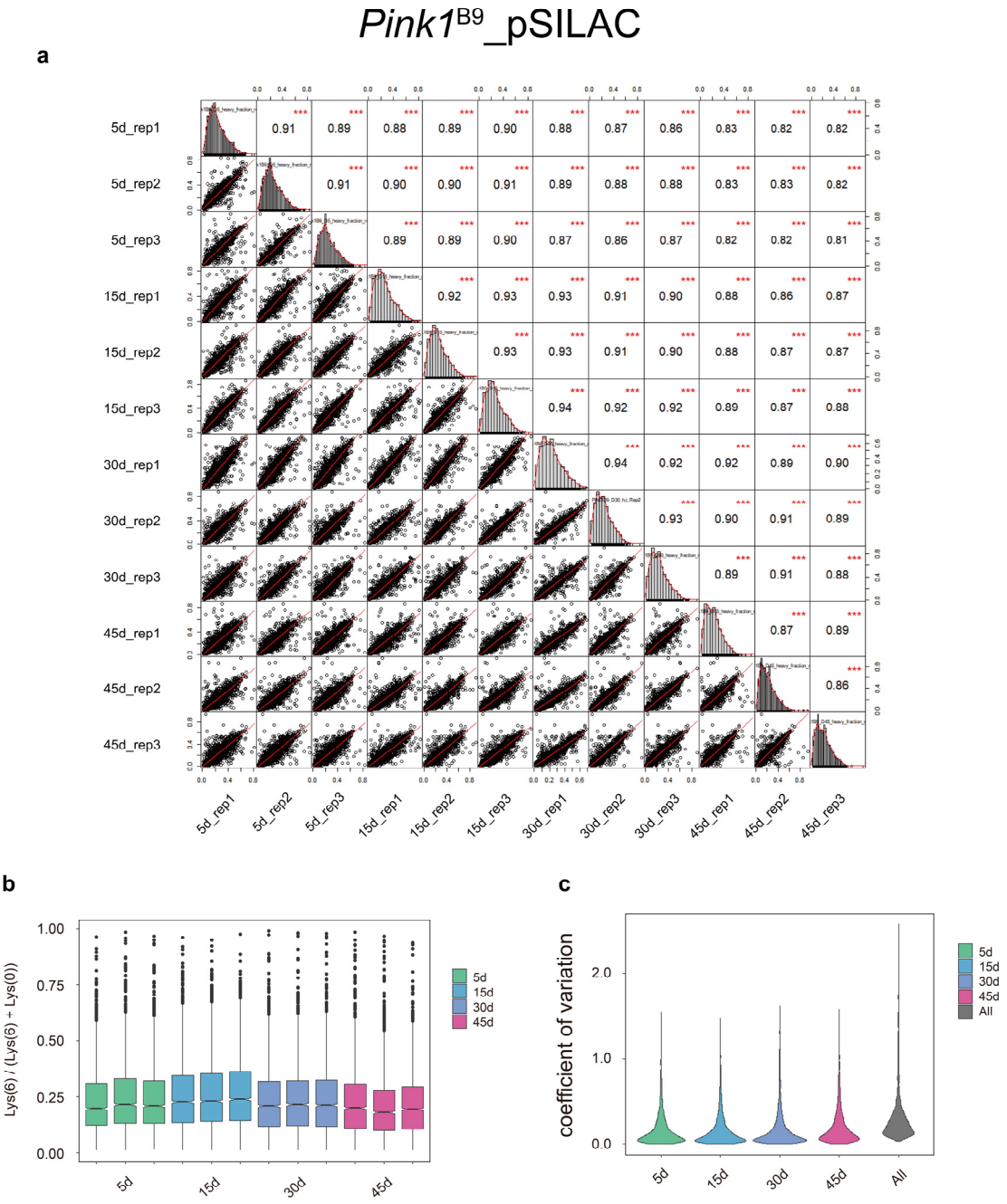
Supplementary Fig. 1 Data reproducibility and comparison between biological replicates of 10-plex TMT quantification of head, muscle and testis tissues in flies. **a-c** Correlation between quantitative proteomic analyses. Data derived from three biological replicates and three aging time points were plotted for each tissue. **d-f** Coefficients of variation (CVs) between different biological replicates or different aging samples in head, muscle and testis.



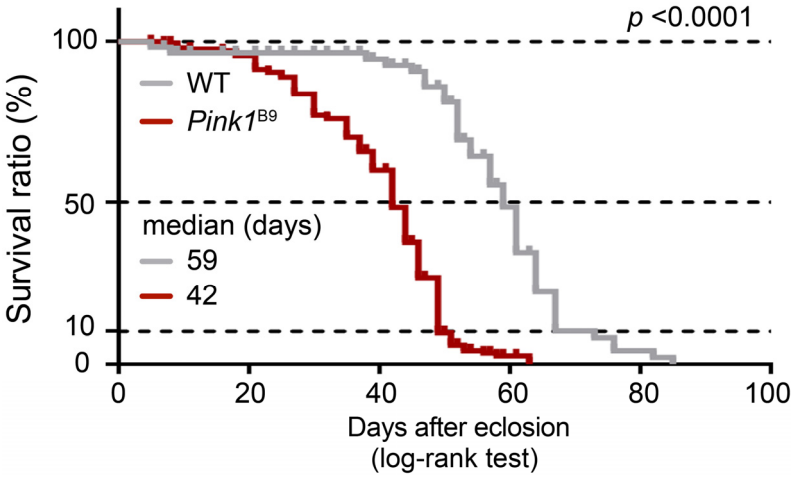
Supplementary Fig. 2 Distributions of the protein abundance ratios between 5d and 60d of fly head, muscle and testis tissues.



Supplementary Fig. 3 Data reproducibility and comparison between biological replicates of pulsed-SILAC quantification of wild-type fly heads. **a** Correlation between pulsed-SILAC proteomic analyses. Data derived from three biological replicates and different time points were plotted. **b** Pulsed-SILAC data of three biological replicates. **c** Coefficients of variation (CVs) between different biological replicates for different aging samples in wild-type fly heads.



Supplementary Fig. 4 Data reproducibility and comparison between biological replicates of pulsed-SILAC quantification of *Pink1*^{B9} mutant fly heads. **a** Correlation between pulsed-SILAC proteomic analyses. Data derived from three biological replicates and different time points were plotted. **b** Pulsed-SILAC data of three biological replicates. **c** Coefficients of variation (CVs) between different biological replicates for different aging samples in *Pink1*^{B9} mutant fly heads.



Supplementary Fig. 5 Lifespan analysis of wild-type and *Pink1*^{B9} mutant flies during the normal aging process.