steady-state ATP levels, and NAD+/NADH

PLOS Genetics

Wen Aw[1]

[1]z3314717@unsw.edu.au

dx.doi.org/10.17504/protocols.io.rted6je

Cage Studies

Wen Aw

EXTERNAL LINK

https://doi.org/10.1371/journal.pgen.1007735

THIS PROTOCOL ACCOMPANIES THE FOLLOWING PUBLICATION

Aw WC, Towarnicki SG, Melvin RG, Youngson NA, Garvin MR, Hu Y, Nielsen S, Thomas T, Pickford R, Bustamante S, Vila-Sanjurjo A, Smyth GK, Ballard JWO (2018) Genotype to phenotype: Diet-by-mitochondrial DNA haplotype interactions drive metabolic flexibility and organismal fitness. PLoS Genet 14(11): e1007735. doi: 10.1371/journal.pgen.1007735

PROTOCOL STATUS

Working

1 ATP and NAD^+ and NADH metabolites were extracted from female third instar wandering larvae harbouring Alstonville and Dahomey mtDNA raised on 1:2 P:C and 1:16 P:C diets (7 replicates per mitotype-diet combination)

2 The extracted metabolites were analysed using liquid chromatography (LC) electrospray ionisation tandem mass spectrometry (ESI-MS/MS)

3 ATP levels were determined by quantifying the area under the curve.

4 The NAD^+/NADH ratio was calculated as relative differences in peak areas between NAD^+ and NADH metabolites.