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Plasma isolation from whole mouse

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Sierra Palumbos¹, Erika Holzbaur¹

¹University of Pennsylvania



Sierra Palumbos

University of Pennsylvania

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Protocol status: Working

We use this protocol and it's working

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Abstract

Protocol describing plasma isolation of adult mice. Used in Palumbos et al., 2025. Adapted from Goldsmith et al., 2022.

All mouse handling and euthanasia must follow IACUC regulations.

Guidelines

Prior approval from an Institutional Animal Care and Use Committee (IACUC) or equivalent ethics committee is required for this experiment.

Trunk blood collection

- 1 Animal is euthanized following IACUC protocol (e.g., isopropanol overdose)
- 2 Animal is decapitated
- 3 Trunk blood is immediately collected in EDTA-treated tube.

Remove cells from plasma

- 4 Centrifuge collected blood in EDTA-treated tube at 2,000 x g for 10 minutes at 4C
- 5 Following centrifugation, transfer liquid component into clean polypropylene tube
- 6 Aliquot .5ml of isolated plasma
- 7 Plasma can be stored at this time at -20C

Denature plasma for immunoblotting

- 8 Dilute plasma 1:1 in 1X PBS
- 9 Add 4X denaturing buffer to diluted sample
- 10 Boil sample for 30 minutes
- 10.1 a. *Due to the high protein content of plasma, increasing denaturing boil time aids in protein separation



11 Samples are ready for protein loading

11.1 a. For best success, leave empty lane (1X denaturing buffer only) between plasma samples