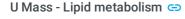


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Working



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ABSTRACT

Summary:

Lipid metabolism is estimated by measuring systemic clearance of [1-14C] palmitate following a bolus injection in awake mice. Lipid metabolism is altered in obese mice.

EXTERNAL LINK

https://mmpc.org/shared/document.aspx?id=145&docType=Protocol

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NAME CATALOG # VENDOR CAS NUMBER RRID Palmitic Acid [1-14C] NEC075H250UC Perkin Elmer

- Survival surgery is performed to establish a chronic indwelling catheter at 5~6 days prior to experiment for intravenous infusion. (refer to M1023: Surgery-jugular vein cannulation)
- 2 Mice are fasted overnight (~15 hours) or for 5 hours prior to the start of experiment.
- Place a mouse in a rat-size restrainer with its tail tape-tethered at one end.
- Expose and flush the intravenous catheter using saline solution. Then, connect the catheter to the CMA Microdialysis infusion pump.
- Collect plasma sample (10 µl) before the start of experiment (basal-0 min) to measure basal glucose levels.
- Administer a bolus intravenous injection of 20 μ Ci of [1- 14 C] palmitate to start the experiment. 6
- Rapidly collect plasma samples (10 μ l each) at 0.5, 1, 2, 3, 4, and 5 min after injection to measure systemic [1-14C] palmitate concentrations.
- At the end of experiment, mice are euthanized, and tissues may be collected for further studies.

9 For data analysis, plasma [1-¹⁴C] palmitate levels vs. time after palmitate injection are plotted, and area-under-curve may be calculated to estimate systemic clearance of labeled-palmitate and lipid metabolism.

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