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Tissue Blocking Protocol for OCT Embedding - University of Minnesota TMCs

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Cellular Senescence Net...



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Protocol status: Working

We use this protocol and it's working

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Abstract

This protocol describes the procedure for embedding an already frozen tissue sample into Optimal Cutting Temperature (OCT) compound. The process includes orienting the tissue, embedding it in OCT, curing the compound, and labeling the block. All performed inside a cryostat at -20°C for sectioning.

Materials

- Optimal Cutting Temperature (OCT) embedding compound
- Metal or plastic embedding molds
- Cryostat set to -20°C
- Sharpie marker

Before start

Ensure the tissue is fully frozen before beginning the embedding process. The tissue should have been frozen and maintained at -20°C or lower.



Preparation

- 1 Ensure the tissue is fully frozen before beginning the embedding process. The tissue should have been frozen and maintained at -20°C or lower.

Embedding Process

- 2 Place a small amount of OCT compound into a metal or plastic embedding mold.
- 3 Inside the cryostat at -20°C , orient the frozen tissue within the mold so the cutting surface faces upward. Proper orientation is essential for obtaining high-quality sections.
- 4 Fill the mold with additional OCT compound to completely encase the tissue, ensuring no air bubbles remain.

Freezing and Curing

- 5 Allow the mold with the tissue and OCT to remain inside the cryostat at -20°C until the OCT freezes and cures completely (approximately 30 minutes to 1 hour).
- 6 Verify that the OCT block is fully solidified and firm before proceeding.

Labeling

- 7 Remove the solidified OCT block from the mold.
- 8 Label the block with the specimen ID using a Sharpie marker to ensure proper identification during sectioning.