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JAX-Sen: Collection and shipment of specimen for single-cell RNA sequencing (scRNA-Seq) V.2

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Laura Robinson[1], Susan Sheehan[1], Gaven Garland[1], Ron Korstanje[1]

[1]The Jackson Laboratory, Bar Harbor, ME, USA

Cellular Senescence Net...

Harshpreet Chandok
The Jackson Laboratory

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We use this protocol and it's working

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Abstract

These samples are part of the JAX-Sen project in the SenNet Consortium. Here we provide details on specimen collection and shipment to the Robson laboratory at The Jackson Laboratory for Genomic Medicine (JAX-GM) in Farmington, CT for its processing for single-cell RNA-sequencing (scRNA-seq).

Troubleshooting

Reagents and Materials:

1
- 2mL Eppendorf tubes or 5 ml Eppendorf tubes
- MACS tissue storage Solution (#130-100-008, MACS Miltenyi Biotech),
- cold storage (4 degrees Celsius)
- Tweezers (clean, sterile)

Quality Key Points:

2
- The tissue specimen should be kept at 4 degrees Celsius and RNAse-free from its excision until it is processed at JAX.
- It is crucial to not store the tissue specimen at RT to avoid any cell death, tissue and/or RNA degradation.

Procedure:

3 **Timeline:** The daily shipping deadline at Jax BH is 12:00 noon. So, harvest the tissues before and closer to noon.

4 **Collection/Harvest:**

4.1 Prepare sterile tubes with cold MACS tissue storage solution (the volume will depend on the size of the specimen, but should cover abundantly the tissue and fill up the tube)

4.2 Animal was euthanized via cervical dislocation.

4.3 Animal was pinned to a necropsy tray which remained on wet ice throughout the harvest.

4.4 Animal was perfused with 20ml cold PBS.

4.5 Heart, pancreas, and kidney was collected and the specimen was transferred immediately into cold MACS tissue storage solution in tubes, on ice.

4.6 Individually parafilm the Eppendorf tube lids to their tubes before shipping.

4.7 Keep at 4 degrees Celsius thereafter, until shipping.

5 **Shipping:**

5.1 Place sample tubes in a plastic box (cardboard boxes insulate the samples from the cold ice) or in double Ziplock bags after checking that they are completely sealed.

5.2 Ship the sample box on wet ice.

5.3 Ship O/N on ice/ice packs, to:
The Jackson Laboratory for Genomic Medicine,
Farmington, CT, 06032