

SOP_SB-CGN_sample_acquisition_and_shipment_scRNA-tissue_1.0		
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1 Acquisition of tissue for scRNA sequencing and sample shipment instructions

1.1 Scope

This SOP describes the process and best practices for acquisition of tissue for single cell RNA sequencing (scRNAseq). Tissues collected for scRNA sequencing **must never be frozen** or be placed directly onto cool packs or ice or be kept at room temperature.

It is of utmost importance to always maintain a tissue temperature between 2°C to 8°C after sample collection.

The process for scRNA nucleus sequencing differs in respect to storage and shipping temperature, which is explained in a separate SOP.

2 Sample collection process

2.1 Preparation before sample collection

- Confirm the tissue preservation tube is intact, free of cracks and contains tissue preservation solution (storage condition: 2 months at 4°C or 1 year at -20°C).
- Tissue preservation solution must be thawed at 4°C for 24 hours in advance.
- Make sure thawing is complete and reverse the tube several times for proper mixing.

2.2 Sample collection

The sample is collected immediately under sterile conditions after surgical resection of the tumor or normal tissue.

- Samples are collected using a sterile scalpel or scissors. Electrotome sample collection should be avoided since it can burn the target tissue.
- Samples should be free of necrotic tissue.
- Samples must not be taken near the site of electrotome scar / burn.**
- Samples should be free of blood clots.

2.3 Sample handling

- Cut the sample into small pieces of about 5mm x 5mm x 5mm, app. 100 mg each (lentil size).
- Rinse sample **twice** using sterile PBS buffer or sterile saline solution. Afterwards transfer immediately to the pre-cooled tissue preservation solution.
- Tissues with high enzyme content, such as gastric or pancreatic cancer or tissues with high bile / bile acid content, e.g., liver tissue, should be rinsed 4 to 6 times using sterile PBS or sterile saline solution, followed by rinsing with tissue preservation solution and only then be transferred into the pre-cooled tissue preservation solution.

Note: Please put only one sample of up to 100 mg per tube. If sample size is > 100 mg, please dissect into smaller pieces and use separate tubes.

- d) Label each sample with a unique identifier and provide the sample ID with the sample submission form. Labelling should be clear, accurate, complete and identifiable.
- e) Store sample temporarily in a fridge at 4°C until shipment.

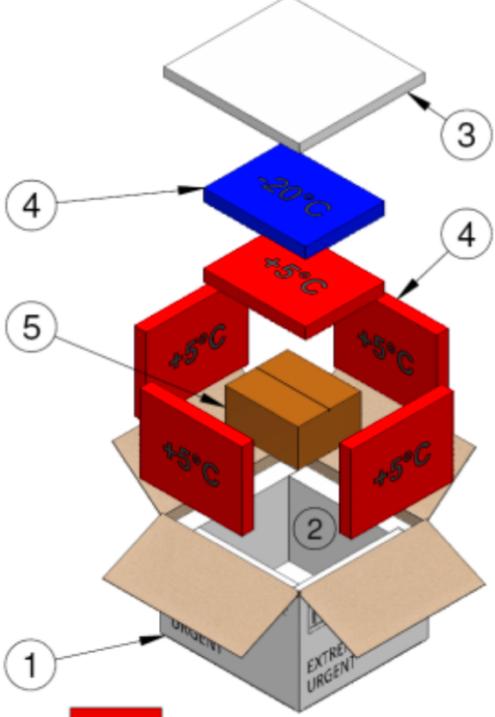
3 Sample shipment

Sample temperature must always remain between 2°C to 8°C until samples arrive at the destination. Avoid direct contact of sample tubes with frozen cool packs as this might lead to local freezing and thawing of tissue causing rupture of cells.

3.1 Materials needed for shipment

- a) Singleron "Sample Submission Form", filled and printed in paper form.
- b) Zip-lock plastic bag, sample protection material (bubble wrap or small insulated bag)
- c) Five 2-8°C cool packs, one frozen packs (-20°C), pre-cooled at least 24 hours prior to sample collection.
- d) One Styrofoam box, with cardboard packaging.
- e) filling material (bubble wrap / paper) to secure sample and cool packs.

3.2 Packing procedure



DHL CHILLED SOLUTION SMALL
(96HRS) +2°C TO +8°C
TEMPERATURE CONTROLLED SHIPPING UNIT
WINTER PACK OUT

ITEM #	DESCRIPTION	QTY
1	CORRUGATED OUTER CARTON	1
2	INSULATED PANELS	5
3	INSULATED LID	1
4	PHARMACOOOL 1350G PACK 5 x CHILLED 1 x FROZEN	6
5	PRODUCT CARTON	1

DHL CHILLED SOLUTION SMALL OVERVIEW	
PRODUCT SPACE	250mm X 214mm X 130mm
PRODUCT CAPACITY	7 LITRES
EXTERNAL DIMS	475mm X 440mm X 370mm
TARE WEIGHT	11.5KG
VOLUMETRIC WEIGHT	15.5KG

1350g PACK +5°C CHILL @ +5DegC FOR 72HRS (MIN)

1350g PACK -20°C FREEZE @ -20DegC FOR 72HRS (MIN)
PRE CONDITIONED @ +20DegC FOR 30MIN PRIOR TO PACKING

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3.3 Shipment Address

- Filled Sample Submission Form
- Samples in zip bag, clearly labeled

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