FR-AgEncode: a French pilot project to enrich the annotation of livestock genomes

Mammary gland sampling protocol

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This protocol describes the anatomical procedure to isolate mammary gland.

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Fr-AgEncode - Mammary gland sampling protocol

This protocol applies to mammary gland which is considered to be homogenous enough so that any piece of mammary gland is representative of the whole tissue.

Required reagents and instruments

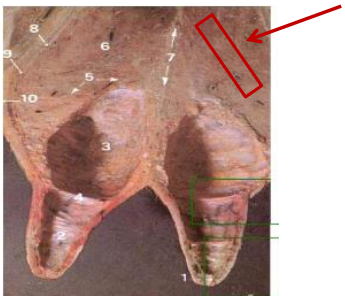
Liquid nitrogen in a storage tank (usually 25 L)
1 small styroform box (30 x 20 x 15) for temporary storage of liquid nitrogen
A pair of cryogloves
1 stainless steel tray or enamel tray, approximate size 20 x 30 cm
Sterile disposable Petri dishes
Disposable scalpels
A rack for 15 mL tubes
Surgeon gloves
Pre-labelled 15 mL and 2 ml cold-resistant tubes, use cold-resistant labels, which will have been checked before, label shows animal number, tissue code, protocol number, aliquot number,
A permanent marker to label the zip lock bag.
Paper towels
Waste bucket
Phosphate-buffered saline (PBS)

Preparatory step

It is recommanded to milk the female before slaughter. Animal is stunned before being slaughtered by bleeding. A professional butcher is in charge of the slaughtering and of extracting the organ from the carcass, in a pre-determined order.

Tissue processing

The mammary gland is removed in its entirety.
Once the mammary gland is in the tray, a slice is taken in the central part of the glandular parenchyma. Cubes of 0.5 cm long edges are cut.



The little cubes of tissue were washed in PBS in order to eliminate residual milk and drained before to be transferred into cryotubes or 15 ml tube and snap frozen in liquid nitrogen.

The detailed Snap-freezing procedures are described in dedicated FAANG protocols (Fr-AgEncode_sampling_protocol_1 and Fr-AgEncode_sampling_protocol_2a).