viscover

ExiTron™ BAT

CT contrast agent for pre-clinical imaging

1 vial (5 x 125 µL injections)	# 130-095-707
5 vials (25 x 125 µL injections)	# 130-095-708

Contents

1. **Description**
   - 1.1 **Background information**
   - 1.2 **Applications**
   - 1.3 **Physico-chemical properties**
   - 1.4 **Requirements**
2. **Protocol**
   - 2.1 **Preparation**
   - 2.2 **Injection**
   - 2.3 **Imaging**
3. **References**
4. **Related products**

1. Description

Components **1 mL ExiTron™ BAT,**
CT contrast agent
or
5 × 1 mL ExiTron™ BAT
CT contrast agent.

Capacity **5 × 125 µL injections**
or
25 × 125 µL injections.

Product format ExiTron BAT is supplied as a sterile isotonic suspension containing 210 mg iodine per mL.

Appearance Opaque white liquid.

Storage Store at 2–8 °C. Do not freeze. The expiration date is indicated on the vial label.

For laboratory and animal research use only. Warning: Not for human or animal therapeutic or diagnostic use. Make sure to comply with all laws and regulations governing research on animals.

1.1 Background information

ExiTron BAT is an innovative contrast agent based on an iodine-containing amphiphile specifically formulated for pre-clinical computed tomography (CT).
Upon intravenous injection, ExiTron BAT circulates in the blood stream and accumulates in brown adipose tissue (BAT) enabling contrast enhancement of this tissue in small animals. ExiTron BAT is mainly excreted via the liver and spleen.

1.2 Applications

ExiTron BAT is indicated for use in CT of small animals, for example mice, to facilitate the visualization of brown fat deposits. Examples include visualization of interscapular and cervical BAT as well as quantification of BAT volume.

1.3 Physico-chemical properties

Mean hydrodynamic diameter: 320 nm.

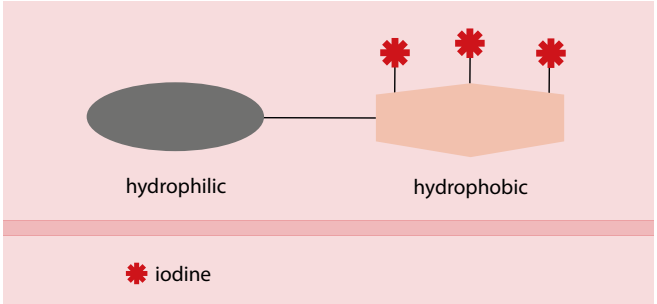

Figure 1: Schematic diagram of ExiTron BAT.

1.4 Requirements

- Sterile syringes and needles (27–30 G)
  Note: To allow sufficient volume for 5 × 125 µL injections per vial, the syringe/needle dead volume should be kept below 70 µL.
  Tip: Use insulin or tuberculin syringes.
- 70 % ethanol

2. Protocol

2.1 Preparation

- Read the entire protocol before starting.
  Tip: For optimum device settings perform initial studies in a suitable imaging phantom.
- The contrast agent is ready for injection as provided.
- For a mouse weighing 20–35 g the typical injection volume is 125 µL corresponding to a dose of 1050 mg iodine/kg body weight (for a 25 g mouse).
  Note: Standard animal-handling procedures and local regulations must be followed.

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2.2 Injection

- Vortex the vial to ensure thorough mixing.
- Disinfect the septum with 70% ethanol. Let septum dry.
- Warm the mouse tail to dilate the veins and enhance their visibility.
- Inject ExiTron BAT (typically 125 µL) slowly via the lateral tail vein of the mouse.

  Note: ExiTron BAT contains no preservatives. Avoid microbial contamination and discard any unused material after 24 hours.

2.3 Imaging

- Follow the imaging protocol as recommended by the manufacturer of your imaging system.
- Taking a pre-contrast image is recommended.
- Begin imaging immediately after injection.

Find examples of ExiTron BAT-enhanced CT images at **www.viscover.berlin**.

3. References

1. Genger, C. *et al.* (2022) ExiTron BAT, a novel contrast agent visualising activated brown adipose tissue (BAT) by CT imaging. World Molecular Imaging Congress Meeting, Miami, USA. https://www.viscover-online.de/data-gallery/ct/.

4. Related products

ExiTron™ U	# 130-095-142, # 130-095-143
ExiTron™ V	# 130-095-283, # 130-095-284
ExiTron™ P	# 130-095-144, # 130-095-145
ExiTron™ nano 6000	# 130-095-146, # 130-095-147
ExiTron™ nano 12000	# 130-095-698, # 130-095-700
ExiTron™ ultra 18000	# 130-095-709, # 130-095-710
ExiTron™ MyoC 8000	# 130-095-701, # 130-095-702

A comprehensive product portfolio for the imaging modalities MRI, CT, US, OI, SPECT, and PET is available at **www.viscover.berlin**.

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