

Surgery Model #: VAG

Subdiaphragmatic Vagotomy Care and Use Document for Rats and Mice

Anesthetic: Isoflurane to effect

Analgesic: Buprenorphine (SQ): Rat and Mouse Dose 0.05 mg/kg

Basic Surgical Procedure Description:

An anesthetized animal is surgically prepared and placed in dorsal recumbency. A 2-cm ventral midline skin incision is made with its cranial terminus at the level of the xiphoid process. A similar incision is then made through the abdominal muscle wall. The intestines are retracted caudally and the liver cranially to expose the esophagus. The segment of the esophagus approximately 1 cm cranial to the stomach is the target. The vagus nerves running along the anterior and posterior surfaces of the esophagus are gently teased away and sectioned with fine micro-dissecting scissors. The muscle incision is closed with absorbable suture and the skin with stainless steel wound clips.

Quality Control:

Animals are individually housed and fasted for 24 hours. Body weights are recorded. A full water bottle is weighed and recorded for each cage. Each animal is given 1M NaCl (58.44 g/L water) via oral gavage at a rate of 10 mL/kg. Immediately after administration, animals are placed back in their individual cages. The time the animal goes to water is recorded. Water consumption is monitored for 1 hour, after which the water bottles are reweighed and water consumption is calculated. Animals for shipment are identified as those modified animals consuming less than one half of the sham average volume.

All qualified animals are evaluated prior to shipment to ensure proper healing and wound clip stability.

Housing:

Animals can be group housed.

Staple Removal:

Staples should be removed 7-10 days post-operatively.

Notes:

Sham animals are identified with a right ear punch unless specified otherwise.