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🌐 Bioluminescence Imaging

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We use this protocol and it's working

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Abstract

This protocol describes a bioluminescence stepwise imaging protocol in mice with AAV-luciferase expression in the vagal afferents using the Ivis Lumina series III imaging system.

Materials

- D-luciferin potassium salt (Xenogen)
- Isoflurane, USP (Covetrus)

Preparation and In vivo imaging

1 Induce anesthesia with isoflurane 2-3%.

2 Shave the neck, thoracic and abdominal area.

3 Prepare D-luciferin potassium salt (Xenogen) stock prepared in phosphate buffered saline (PBS) at 15mg/mL.

4 Inject D-luciferin solution (150mg/kg) intraperitoneal.

5 Image mice in supine position at 5-, 10- and 15-minutes post-luciferin injection.

Software protocol and analysis

6 Living imaging software (Ivis imaging) was configured to luminescent imaging mode with an exposure time of ⏱ 00:00:00 and 5-minute delay.

7 Post-acquisition, the total flux of photons/radiance per second (s) in each pixel in the ROI area, in a square
centimeter (cm^2) of the tissue. This data is then multiplied by one steradian (sr), which result in average radiance displayed as (photons/s/cm^2/sr).