MediLumine

Tools for In Vivo Imaging and Preclinical Research

In partnership with

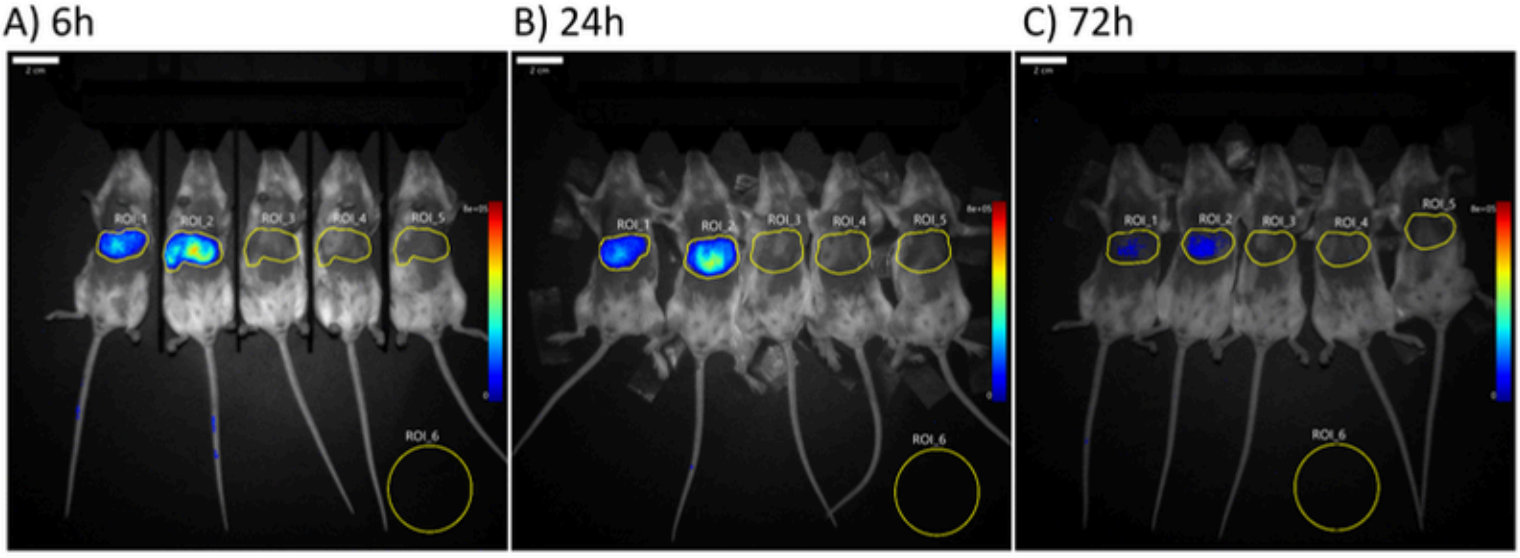
Kent Scientific

10 Mouse Bioluminescence Imaging Fully Integrated with SomnoFlo



PRISM BIO-BOX for 10 Mouse In Vivo Bioluminescence and Fluorescence Imaging

BLI Case Study Example with mRNA LNP



BLI of five mice (dorsal) at 6, 24 and 72 h post-injection of LUC+ mRNA LNP (RIBOPRO, Netherlands), mice 1 and 2 IV, mouse 3 control, mice 4 and 5 sub-cutaneous, ROIs 1 to 5 on liver/spleen with ROI 6 as background, acquired on the MediLumine PRISM™ BIO-BOX at 1, 2 and 2.5 min exposure on a common radiance scale (ph/s/cm²/sr).

No Compressed Gas. No Waste.

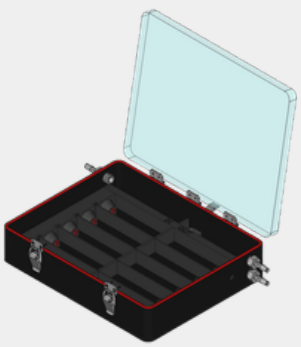
Kent Scientific

We are excited to announce that Kent Scientific, makers of the SomnoFlo low-flow anesthesia system, is now an authorized distributor of our PRISM in vivo imaging systems. PRISM systems now ship fully integrated with SomnoFlo, delivering a complete, turn-key small animal imaging workflow right out of the box. Because SomnoFlo runs on ambient air, there is no compressed gas cylinder in the imaging suite, and the benchtop PRISM plus anesthesia suite, safer for animals and technicians, can move between laboratories as one system. The PRISM platform has been cited in more than 40 peer reviewed publications.

Anesthesia and Biosafety, Solved at the Bench



SomnoFlo Low-flow electronic vaporizer uses ambient air and draws isoflurane directly from the bottle



10 Mouse Isolation System for BSL3 Facilities. HEPA Filters can be easily added to this unit.

BLI, FLI, SWIR Contrast Agents



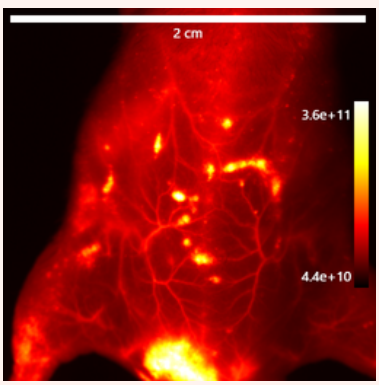
Luciferin Potassium Salt



Fenestra ICG



Vascular Tracker 1010



Optional SWIR

IV injection of pegylated AIE nanoparticle, excited using the PRISM™ SWIR 785 nm laser. In addition to detailed vascular structures,signal is evident in superficial skin lesions and clearance through the bladder, highlighting both biodistribution and excretion pathways.

Specifications

- 25 cm field of view for 10 mouse imaging
- 9 MP sensor, 3000 x 3000 array
- 3.76 µm native pixel
- Zoom to 4 cm FOV for 13.3 µm/pixel object space sampling
- Dark current below 0.001 e-/pixel/s
- Full 9 MP frame read in under a second with live preview
- Extended dynamic range mode for 2.5x additional dynamic range
- Low-flow isoflurane vaporizer on ambient air, 0.1 percent precision, flow from 50 mL/min
- Sensitivity verified against a NIST traceable source at the BLI autoluminescence threshold
- Compact size measuring 61 x 61 x 91 cm
- Optional BSL3 isolation chamber for 10 mice
- PYRAMID software suite for acquisition and image analysis (unlimited licenses)
- Heating pad to maintain the animal's temperature between 20 to 45°C

Illumination specs

- Dual broadband white light source with heads at top left and top right of the chamber and collimating optics on each, for uniform illumination across the full 25 x 25 cm field
- 24 excitation and emission combinations online in the base configuration (6 x 4), expandable to 360 (18 x 20), selected from a 14 excitation and 7 emission filter inventory spanning 460 to 830 nm.
- Capacity to automate acquisition sequences for multicolor FLI and BLI

Additional Options

- SWIR / NIR-II imaging: second InGaAs camera, 900 to 1700 nm, integrated in the same enclosure via dichroic beamsplitter with 1000 and 1300 nm longpass filters
- 3D trans-fluorescence: laser transillumination with depth reconstruction, one laser at 635, 660, 730 or 785 nm, expandable to four. 3D profile scanner can also be used for 3D BLI
- Motorized vertical stage: automated height control with autofocus for variable 4 to 25 cm FOV

Contact info@medilumine.com or visit www.medilumine.com to request a quote for the PRISM™ BIO-BOX In Vivo Imaging System