

## Luminicell Tracker™ – Vascular Labelling Kit

## PRODUCT INFORMATION

Product Name	Part No.	Concentration	Storage	Absorption Maximum	Emission Maximum
Luminicell Tracker™ 540 – Vascular Labelling Kit	LCTV540-30-ST	200 nM in Ultrapure Water	2 – 8 °C,  do not freeze	423 nm	540 nm
Luminicell Tracker™ 670 – Vascular Labelling Kit	LCTV670-30-ST	200 nM in Ultrapure Water		510 nm	670 nm

## PRODUCT DESCRIPTION

Luminicell Tracker™ are highly emissive fluorescent organic nanoparticles with great biocompatibility. Luminicell Tracker Vascular Labelling Kits can be used to fluorescently tag vasculature in living tissues and animals for studies of inflammation and vascular leakage.

## LABELLING PROTOCOLS

## Prepare Mice for Imaging

1. Remove the hair on/around the area of the animal to be imaged to minimize absorption/scattering of light by the hair. Remove hair thoroughly from the animal for 3D imaging using IVIS or FMT.
2. For imaging skull bone marrow, make a skin incision to expose the skull before immobilizing the head on the imaging stage.

## Microinjection

3. Dilute 20–50 µL of the stock solution of the Luminicell Tracker™ Vascular Labelling Kit to 1X PBS to make a total volume of 100 µL injection solution. (This dosage is recommended for mice with ~25 g weight.)

Note: For imaging of rats, the concentration of the labelling solution may be adjusted based on the blood volume.

4. Intravenously inject the Luminicell Tracker™ Vascular labelling solution via the lateral tail vein. The injection can be repeated daily if needed.

## USER PROTOCOL

- For bone marrow imaging, anesthetize the mouse and place it on the heating pad to maintain the core body temperature of 37°C before injection. Inject the Luminicell Tracker™ Vascular labelling solution via retro-orbital injection.

### In Vivo Imaging

- The animal can be directly imaged after injection with the Luminicell Tracker™ Vascular using fluorescence imaging systems such as IVIS and two-photon microscopes. The injected nanoparticles can be retained in the vascular system with minimum leakage and can be imaged for up to 3 hours.

**Table1.** Compatible instrument parameters.

Product Name	Laser excitation $\lambda$ (nm)		Filter Set (nm)
	Single-photon	Two-photon	
Luminicell Tracker™ 540 – Vascular Labelling Kit	405/458/488	800	480 – 560
Luminicell Tracker™ 670 – Vascular Labelling Kit	458/488/543	800/950	670 – 800