

Vascular Tracker™

Biocompatible Fluorescent Nanoparticle Vascular Labelling Kit



Vein injection



Imaging

Visualizing vasculature through fluorescence perfusion

Vascular Tracker (previously known as Luminicell Tracker) consists of biocompatible organic fluorescent nanoparticles, that can be used to visualise vascular structure for both in vitro vessel models and in vivo vasculature studies of living tissues and animals. Vascular Tracker is designed to flows smoothly inside blood vessels under normal condition. When used in inflammation or infection models, the nanoparticles leak out in response to blood vessel permeability changes, which can be used to study vessel leakage sites with precise detection.

>10X Brighter Fluorescence Signal

Compared against quantum dots of similar size under same excitation and emission

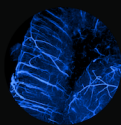
Unparalleled Photostability

No observable photobleaching after 30 minutes continuous laser irradiation under full power

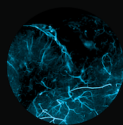
Compatible with One & Multi-photon

Our products unique absorption properties give rise to the options for different imaging capabilities

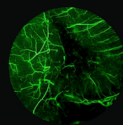
Available solutions to allow full spectrum imaging (visible to NIR-II, multi-photon)



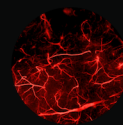
470 (Blue)



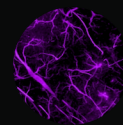
506 (Cyan)



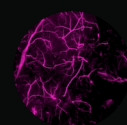
540 (Green)



670 (Red)

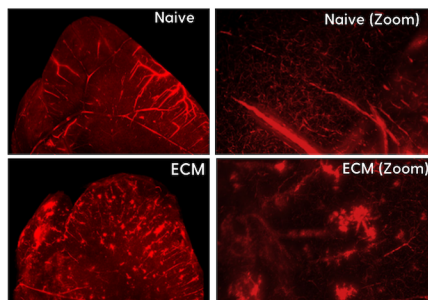


810 (NIR-I)



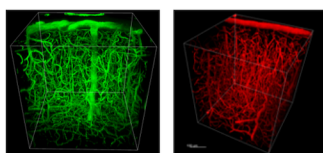
1010 (NIR-II)

Early identification of leakages with Vascular Tracker 670



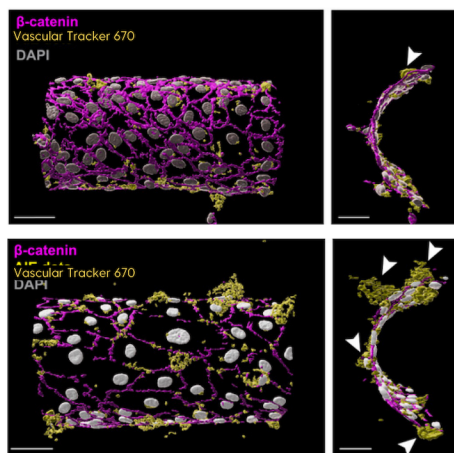
Vascular Tracker 670 allows precise visualisation of vessel leakage sites for mice with Experimental Cerebral Malaria (ECM), imaged with light sheet microscopy.

3D vascular reconstruction



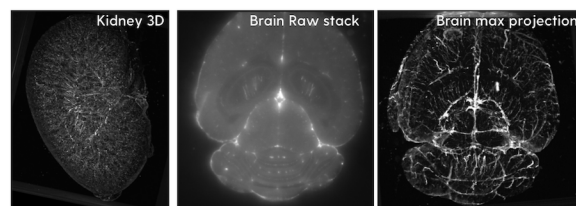
Mouse brain imaged with Vascular Tracker 540 and 670 using multi-photon microscopy.

Establishing human model of cerebral cavernous malformations (CCM) deficient 3D vasculature



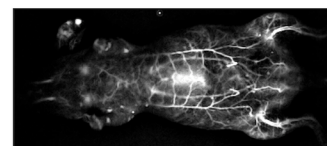
3D surface rendering of immunofluorescent staining for cell-cell junctions (β-catenin, magenta), Vascular Tracker 670 (yellow), and nuclei (DAPI, gray). Leakage sites indicated with white arrows. (Dr. Anne Legendijk and Elysse Moris)

Ex vivo organ fluorescence imaging using Vascular Tracker 670



Vascular Tracker was injected before organs were harvested, frozen and prepared for imaging by serial block face imaging (Kratoscope, Kaer Labs). Courtesy N. Chouin & M Chereil, CRC2NA Nantes.

Whole mice vasculature imaging with Vascular Tracker 1010



NIR-II imaging was performed post 1 hour IV injection of Vascular Tracker 1010. Image contrast and spatial resolution was improved with Montecarlo Restoration. (Dr. Xavier Le Guével and Dr. Véronique Josserand)

luminicell

Luminicell specialises in advanced biocompatible fluorescence probes designed for long-term live cell, vasculature and deep tissue imaging. The company also offers customisable bioconjugation and labelling solutions with exceptional performance.

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Vascular Tracker™

Biocompatible Fluorescent Nanoparticle Vascular Labelling Kit

Vascular labelling kits

product name	Ex (nm)	product code	configuration				
			kit volume			surface	
			(μL) code			code	description
Vascular Tracker 470 (Blue)	355	LCTV-470	100	250	500	02	methoxy (inert)
Vascular Tracker 506 (Cyan)	355	LCTV-506					
Vascular Tracker 540 (Green)	423	LCTV-540					
Vascular Tracker 670 (Red)	506	LCTV-670					
Vascular Tracker 810 (NIR-I)	635	LCTV-810					
Vascular Tracker 1010 (NIR-II)	725	LCTV-1010					

Notes

1. Product names correspond to their respective emission wavelengths (nm) in water.
2. Excitation (Ex) maxima are listed separately. Spectral profile available upon request.
3. Kit volumes of 100-, 250- and 500-μL are typically suitable for 20, 50, and 100 test respectively.
4. Nanoparticle surfaces are PEGylated, and surface conjugated with methoxy group to serve as inert fluorescent agent for vessels. Other surface chemistries are available upon request.
5. Products listed above are for research use only (RUO). Not for diagnostic use.
6. Get in touch with our experts for customised product request.

Learn more about
Vascular Tracker

