

IRDYE® 800CW PEG CONTRAST AGENT

Overview

Enhanced permeability and retention (EPR) is a common characteristic of tumor vasculature. The vascular endothelium in the tumor microenvironment is often discontinuous, allowing molecules to diffuse into the surrounding tumor tissue. [1,2] In addition to EPR, the lymphatic drainage for these regions is poor [3]. Hence, larger molecules tend to accumulate.

IRDye 800CW PEG Contrast Agent is a non-specific imaging agent intended to exploit EPR in tumor biology. In appropriate mouse models, the IRDye 800CW PEG highlights surface vasculature for approximately 0.5 hour post injection as seen in Figure 1. Approximately 4 hours post injection, retention of the labeled macromolecule is visible in the tumor (Figure 2). At 9 hours post intravenous injection the tumor is well defined (Figure 3).

In addition, IRDye 800CW PEG Contrast Agent may also be used effectively as a lymph tracking agent when given intradermally (Figure 4). Images captured on the Pearl® Imaging System.

Specifications

Description:

- IRDye 800CW PEG is a non-specific contrast agent

Pack Size:

- 15 nmol per tube (~10 doses)
- Appearance: lyophilized solid

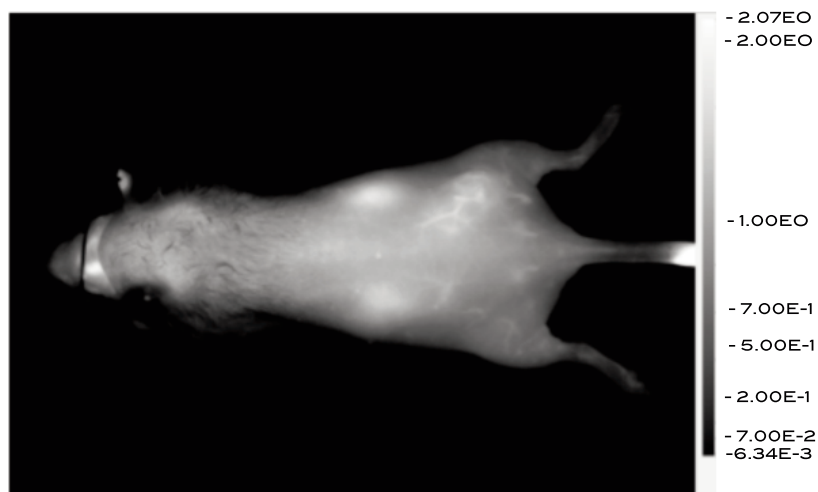


Figure 1. Athymic male nu/nu mouse (~5-6 wks old) 0.5 hour after receiving IRDye 800CW PEG (1 nmole) intravenously. Surface blood vessels are visible. Vascular feature is mouse model dependent, see pack insert for precautions.

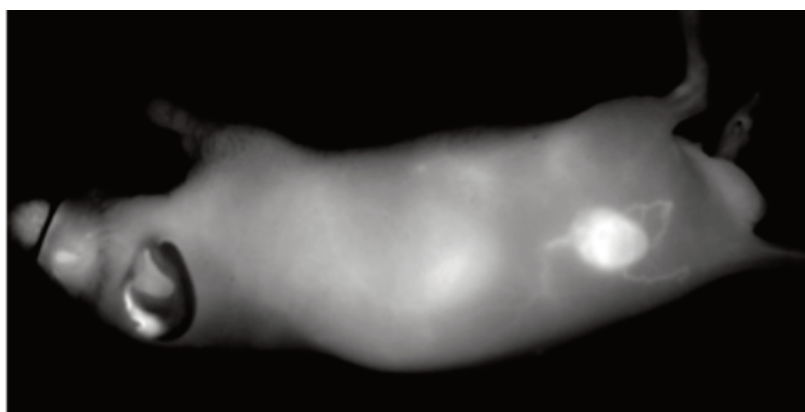


Figure 2. Athymic male nu/nu mouse approximately 4 hours after receiving IRDye 800CW PEG (1 nmole) intravenously. Large blood vessels and tumor are visible.

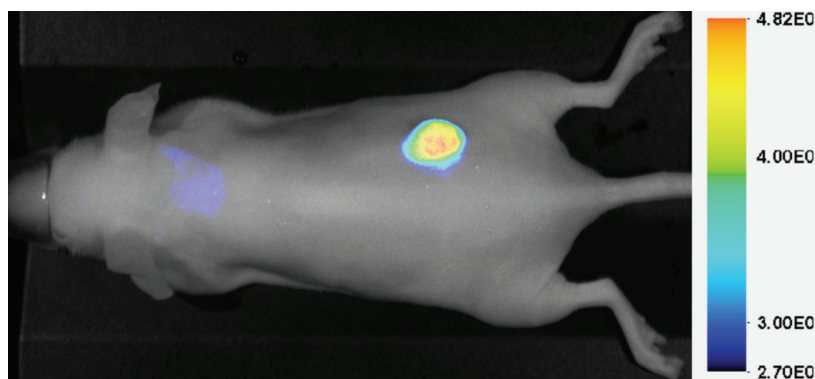
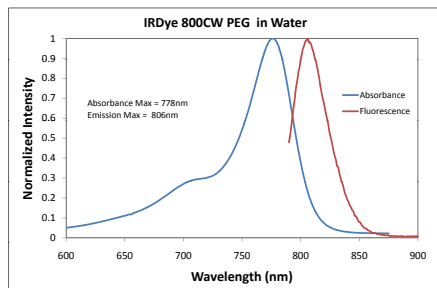


Figure 3. Athymic male nu/nu mouse approximately 9 hours after receiving IRDye 800CW PEG (1 nmole) intravenously. Tumor is clearly defined.



IRDye® 800CW Properties

- Absorption maximum: 778 nm
- Emission maximum: 806 nm

Advantages of IRDye Optical Agents

- High signal-to-noise ratio.
- Low NIR autofluorescence from tissues, cells, biological materials, and drug compounds.
- IRDye 800CW absorption/emission near 800 nm matches NIR absorption minima for bodily fluids and tissues, resulting in excellent tissue penetration.

References

- ¹ Vasey, PA, et al. 1999. Clin. Cancer Res. 5:83-94.
- ² Matsumura, Y and H Maeda. 1986. Cancer Res 46:6387-6392.
- ³ Seymour, LW. 1992. Crit. Rev. Ther. Drug Carrier Syst. 9(2):135-187.

Ordering Information

926-50401 IRDye 800CW PEG Contrast Agent

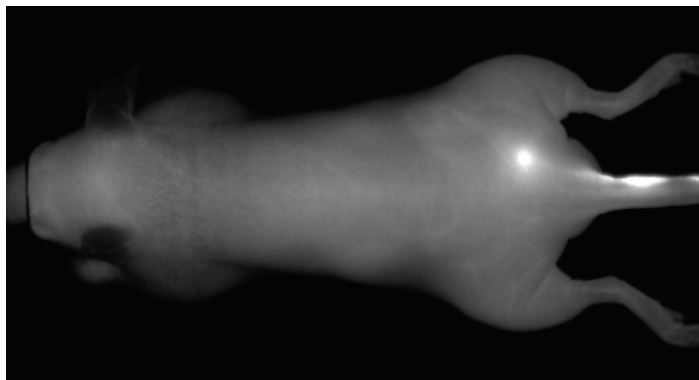


Figure 4. Athymic male nu/nu mouse minutes after receiving IRDye 800CW PEG (~0.1 nmole) intradermally on the tail (right side). Image highlights use of IRDye PEG as a lymph imaging agent.

Related Products

929-08972	IRDye 800CW Carboxylate	929-70020	IRDye 800CW NHS Ester Dye (0.5 mg)
926-08946	IRDye 800CW 2-DG Optical Probe	929-70021	IRDye 800CW NHS Ester Dye (5.0 mg)
926-08446	IRDye 800CW EGF Optical Probe		
926-09889	IRDye 800CW RGD Optical Probe		
926-09375	IRDye 800CW BoneTag™ Optical Probe		
926-09376	IRDye 680 BoneTag™ Optical Probe		
928-38040	IRDye 800CW Protein Labeling Kit (High MW)		
928-38042	IRDye 800CW Protein Labeling Kit (Low MW)		
928-38044	IRDye 800CW Protein Labeling Kit (Microscale)		



For use on the Pearl® Imager. Learn more at www.licor.com/pearl

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