Product Number
**926-08446**

Storage: -20°C
prior to reconstitution;
4°C after reconstitution

Revised: May 2011

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Doc #988-12108

LI-COR Biosciences

4647 Superior Street • P.O. Box 4000
Lincoln, Nebraska 68504 USA
North America: 800-645-4267
International: 402-467-0700
FAX: 402-467-0819

LI-COR GmbH Germany, Serving Europe, Middle East and Africa: +49 (0) 6172 17 17 771
LI-COR UK Ltd. UK, Serving UK, Ireland, and Scandinavia: +44 (0) 1223 422104
All other countries, contact LI-COR Biosciences or a local LI-COR distributor:
Http://www.licor.com/distributors

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BrightSite™ Small Animal Imaging Agents

# *IRDye® 800CW EGF Optical Probe*

IRDye 800CW EGF Optical Probe is a near-infrared labeled, recombinant human epidermal growth factor. It can be used as an optical tracking agent for *in vitro, in vivo*, whole organ, and tissue section analysis, allowing the same probe to be used in all steps of the discovery process.

## Description

Epidermal growth factor (EGF) is a polypeptide containing 54 amino acid residues (molecular weight = 6.2 kDa). EGF stimulates differentiation and proliferation of epithelial cells. Binding of EGF to the EGF receptor (EGFR) stimulates mitogenic activity and has proven effective in both *in vitro* and *in vivo* assays when monitoring specific solid tumor models that exhibit over-expression of EGFR[1-5].

## Material

IRDye 800CW EGF Optical Probe solution was passed through a 0.2 µm nylon membrane into a sterile polypropylene tube and then lyophilized. The product is supplied as a lyophilized powder from phosphate-buffered saline (PBS), pH 7.2. The recommended individual dose per mouse (~25 grams) is 1 nmole. Each tube contains 20 nmole of IRDye 800CW EGF Optical Probe.

## Properties (in 1X PBS)

- Absorption maximum: 779 nm
- Emission maximum: 795 nm
- Appearance: Lyophilized pellet

## Storage and Handling

Upon receipt, immediately store at -20°C prior to reconstitution. When stored properly, this product is stable in the lyophilized state for 3 months. After reconstitution, store at 4°C. Reconstituted material should be used within 2 weeks. ***Protect from light.***

### Directions for Use

- Reconstitute material in 1.5 ml of sterile 1x PBS for a final concentration of 1.33 nmole per 100 µl. To ensure sterility, filter through a 0.2 µm nylon membrane.
- Recommended administration: Inject 1 nmole intravenously via tail vein.
- *In vivo* Imaging: Optimal signal-to-noise ratios occur 3-4 days post injection; however, this may vary for each tumor model system used.
- Clearance: In a tumor-negative animal (NOD/SCID mouse), there is greater than 90% whole body clearance in 24 hours post injection.

### Precautions

The probe is processed through the liver and kidneys with excretion via the bladder, which may increase background when imaging in the abdominal region.

***Continued***

## References


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3. Konstantin Sokolov, Michele Follen, Jesse Aaron, Ina Pavlova, Anais Malpica, Reuben Lotan, and Rebecca Richards-Kortum. Real-time vital optical imaging of precancer using anti-epidermal growth factor receptor antibodies conjugated to gold nanoparticles. *Cancer Research*, 63: 1999-2004, 2003.
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