Product Number
926-50000

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

Revised: July 2011

Updates available at:
http://biosupport.licor.com

Doc # 988-11826

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

www.licor.com

BrightSite™ Small Animal Imaging Agents

IRDye® 680RD HA Optical Probe

IRDye 680RD HA (hyaluronan) Optical Probe from LI-COR® Biosciences is a near-infrared labeled optical imaging agent for small animal imaging.

Description

Hyaluronan (hyaluronic acid; HA) is an extracellular matrix glycosaminoglycan formed from disaccharide units containing N-acetylglucosamine and glucuronic acid. HA interacts with several cell surface receptors, namely CD44, RHAMM (receptor for hyaluronan mediated motility; CD168), LYVE-1 (lymphatic vessel endothelial HA receptor-1), HARE (hyaluronan receptor for endocytosis), layilin, and Toll-4. It binds to proteoglycans in cartilage and other tissues and fills an important structural role in the organization of the extracellular matrix. The agent is catabolized by receptor-mediated endocytosis and lysosomal degradation after transport via lymph to lymph nodes.

Material

The IRDye 680RD HA Optical Probe solution was passed through a 0.2 µm nylon membrane into a sterile polypropylene tube and lyophilized. The product is supplied as a powder lyophilized from water. The recommended individual dose per mouse (body weight ~25 g) is 4 nmol. Two tubes each containing 25 nmol of IRDye 680RD HA Optical Probe are provided.

Properties (in 1X PBS)

- Absorption maximum: 671 nm
- Emission maximum: 695 nm
- Appearance: Lyophilized solid

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 6 months. After reconstitution, store at 4°C. Reconstituted material should be used within 2 weeks. ***Protect from light.***

Directions for Use

For systemic localization of lymph nodes: Inject 4 nmol intravenously via the tail vein. Reconstitute material in 0.625 mL of sterile 1X PBS for a final concentration of 0.04 nmol/µL. Allow the solution to sit at room temperature for 15 min to ensure the agent is completely dissolved. If desired, filter sterilize the solution through a 0.2 µm filter system.

For lymph vessel or nodal tracking in a specific region: Reconstitute the lyophilized solid in 125 µL 1X PBS to a final concentration of 0.2 nmol/µL. Inject ~ 0.6 nmol (3 µL) intradermally in region of interest.

- *In vivo* Imaging: It is important that unretained agent be allowed to clear from the animal's circulation prior to imaging. Suggested initial time frame for imaging is 24 hr post-injection; however, the timing required to achieve optimal signal-to-noise ratios will vary for each model system. IRDye 680RD HA does persist in lymph nodes for an extended period after IV administration (greater than 2 weeks). For best results, determine the optimal imaging time empirically. It is recommended the intradermal injection site be covered when imaging. This can be accomplished with the black drape provided with the Pearl® Impulse Imager.

Precautions

The probe is processed through the liver and excreted through the intestines, kidneys and bladder. This may cause increased background when imaging in the abdominal region.

Applications

Browse www.licor.com for posters, papers, and protocols related to the following applications.

- *In vitro* cell-based assays
- *In vivo* near-infrared optical animal imaging

References

1. Kuo, J.W. 2006. Practical Aspects of Hyaluronan Based Medical Products. CRC Press, Taylor & Francis Group; Boca Raton, FL.
2. Stern, R. (Ed) 2009. Hyaluronan in Cancer Biology. Academic Press, Elsevier, San Diego, CA.