

Product Number

929-60011

(0.5 mg)

929-65011

(5.0 mg)

Storage: -20 °C

Revised: August 2013

Updates available at:

<http://biosupport.licor.com>

**Limitation of Liability and
Limited Use Label License**

LI-COR IRDye® Infrared Dyes and reagent products are offered for research purposes only and are not intended for human therapeutic or diagnostic use. The purchase of this product conveys to the buyer a limited non-transferable right to use the amount of product purchased and the components of the product in research conducted by the buyer (whether the buyer is a not-for-profit, academic or for-profit entity). The buyer shall not sell or otherwise transfer this product, its components, or materials made therefrom to any third party. Buyer shall not use this product or its components for commercial purposes. The term "commercial purposes" shall mean any activity by a party for consideration and may include, but is not limited to, use of the product or its components (i) in manufacturing, (ii) to provide a service, information or data, (iii) for therapeutic, diagnostic or prophylactic purposes, or (iv) for resale, whether or not such product or its components are resold for use in research. The use of this product by the buyer constitutes agreement with the terms of this limited use label license for LI-COR IRDye infrared dyes and reagent products. Inquiries regarding the licensing of one or more IRDye infrared dyes for any use beyond the limited use described above should be submitted by e-mail to busdev@licor.com.

LI-COR BIOSCIENCES DOES NOT PROVIDE RESEARCH ADVICE OR DETERMINE OR RECOMMEND ANY POTENTIAL USES FOR IRDYE INFRARED DYES AND REAGENT PRODUCTS. LI-COR BIOSCIENCES MAKES NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AS TO ANY MATTER INCLUDING, BUT NOT LIMITED TO, WARRANTY OF FITNESS FOR PURPOSE, OR MERCHANTABILITY OR RESULTS OBTAINED FROM USE OF IRDYE INFRARED DYES. IN NO EVENT SHALL LI-COR BE LIABLE FOR LOST PROFITS, CONSEQUENTIAL, EXEMPLARY, SPECIAL, DIRECT, INCIDENTAL, OR PUNITIVE DAMAGES, OR ATTORNEY FEES, EVEN IF LI-COR HAD BEEN ADVISED OF, KNEW, OR SHOULD HAVE KNOWN, OF THE POSSIBILITIES THEREOF. NO EMPLOYEE, AGENT OR REPRESENTATIVE OF LI-COR HAS THE AUTHORITY TO BIND LI-COR TO ANY ORAL REPRESENTATION OR WARRANTY EXCEPT AS SPECIFICALLY SET FORTH HEREIN.

© 2013 LI-COR, Inc. LI-COR is an ISO 9001 registered company. For LI-COR patent information, visit www.licor.com/patents. Use of IRDye infrared dyes in copper-catalyzed click chemistry reactions is covered by one or more U.S. or foreign patents owned by The Scripps Research Institute. LI-COR and IRDye are registered trademarks of LI-COR, Inc. in the United States and other countries.

Doc # 988-13857

LI-COR®

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/bio

IRDye® 650 Alkyne Infrared Dye

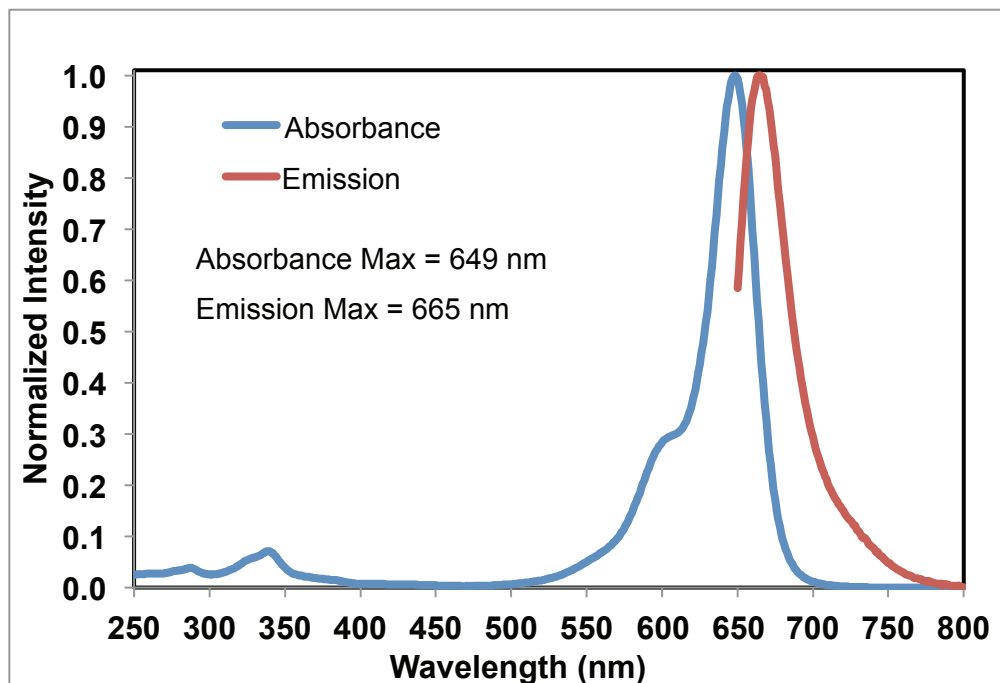
Product Description

IRDye 650 Alkyne provides the functionality for preferential labeling of molecules containing azide groups (-N₃) with IRDye 650. Reaction of the alkyne group with the azide group is typically accomplished by copper-catalyzed Click Chemistry. Within physiologically relevant temperature and pH ranges, IRDye 650 Alkyne is inert toward naturally occurring nucleophiles such as amines and hydroxyls. At higher pH or upon exposure to short-wave ultraviolet (UV) light, the alkyne group may become unstable toward sulfhydryls (-SH, thiols), dihalogens such as iodine (I₂), and organophosphines such as tris(2-carboxylethyl)phosphine (TCEP).

Properties

Molecular Weight	g/mole	1038.12
Abs max	methanol	651 nm
	1X PBS	649 nm
Em max	methanol	668 nm
	1X PBS	665 nm
ε-Molar Absorptivity	Solvent	(L/mol cm)
	methanol	240,000
	1X PBS	230,000
	methanol:1X PBS	230,000
Correction factor at 260 - 280 nm		3%

Absorption and Emission Spectra in 1X PBS



General Guidelines for Use

- Store lyophilized dye at -20 °C protected from light and moisture for up to 1 year.
- Dissolve dye in water or DMSO to 10 - 20 mg/mL. *Dye solubilized in aqueous solutions or in DMSO is stable for up to two weeks when stored at -20 °C and protected from light.*
- Alkyne technology enables chemoselective labeling of azide groups within physiologically relevant temperature and pH ranges by copper-catalyzed Click Chemistry.

NOTE: *When labeling a peptide or protein with IRDye[®] 650 Alkyne, the choice of solvent for the dye is dependent on the stability of the target. Since a small amount of dye is needed to label large (i.e. >45 kDa) proteins, the amount of DMSO in the reaction is negligible and should not affect protein stability. However, since a proportionally larger amount of dye is required to achieve adequate labeling for a small protein (i.e. <45 kDa) or peptide, the level of DMSO in the reaction is more likely to affect the target stability. Dye solubilized in aqueous solutions or in DMSO is stable for up to two weeks when stored at -20 °C and protected from light.*

When using copper-catalyzed Click Chemistry to label a biomolecule, the stability of the bioconjugate toward the copper catalyst must be evaluated. Furthermore, copper reagents can be cytotoxic and should not be used for in vivo experiments. Residual copper reagents should be removed from the bioconjugate prior to use in subsequent in vivo experiments.

For further questions, please send a detailed inquiry to biohelp@licor.com.

For further discussion of copper-catalyzed Click Chemistry used for fluorescently labeling biological samples, see:

1. Rusch, M.; Zimmermann, T. J.; Bürger, M.; Dekker, F. J.; Görner, K.; Triola, G.; Brockmeyer, A.; Janning, P.; Böttcher, T.; Sieber, S. A.; Vetter, I. R.; Hedberg, C.; Waldmann, H. *Angew. Chem. Int. Ed.* **2011**, *50*, 9838 - 9842.
2. Cigler, P.; Lytton-Jean, A. K. R.; Anderson, D. G.; Finn, M. G.; Park, S. Y. *Nature Mater.* **2010**, *9*, 918 - 922.
3. Best, M. D. *Biochemistry* **2009**, *48*, 6571 - 6584.