

# Red Fluorochrome Label

Caution: For Laboratory Use. A product for research purposes only.

## VivoTag® 645-MAL

Product Number: NEV11274

**DESCRIPTION:** *VivoTag® 645-MAL* is a thiol (-SH, sulfhydryl) reactive maleimide-containing red fluorochrome for molecular labeling applications. *VivoTag 645-MAL* enables optimized and integrated imaging applications in both *in vivo* and *in vitro* applications. *VivoTag 645-MAL*'s superior brightness makes it particularly well suited for the labeling of thiol and cysteine containing molecules for a wide range of imaging applications. The 645 nm fluorescence wavelength is ideal for biological imaging applications on *in vitro* and *in vivo* fluorescence systems, including advanced microscopes, high content imaging and flow cytometry systems. It is also optimized for use with fluorescence tomography FMT™ imaging systems with expanded wavelength capabilities to enable quantitative imaging of up to four channels and four different biomarkers of interest *in vivo*.

### MATERIALCONTENTS:

*VivoTag 645-MAL*: 5 mg vial.

**PROPERTIES:** The physical characteristics of *VivoTag 645-MAL* can be found in **Table 1** and **Figure 1**.

### STORAGE & HANDLING:

- Upon receipt, *VivoTag 645-MAL* should be **IMMEDIATELY STORED AT -20 °C AND PROTECTED FROM LIGHT**.
- When stored and handled properly, *VivoTag 645-MAL* is stable for three months from date of shipment.
- Allow *VivoTag 645-MAL* to equilibrate to room temperature before using.

### APPLICATIONS:

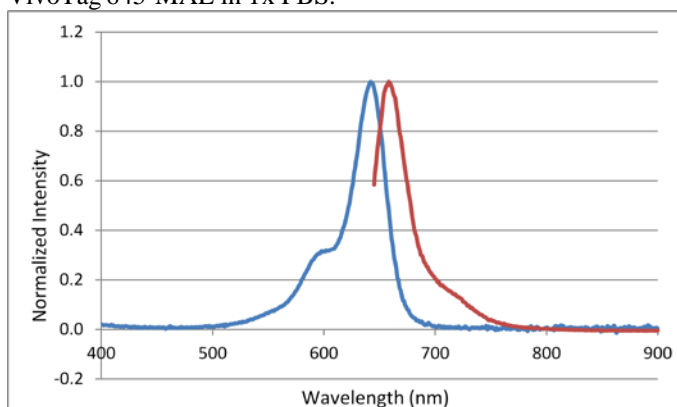
- Red fluorophore optimized for labeling target molecules including peptides, small molecules, nanoparticles, and macromolecules such as proteins and antibodies.
- Highly hydrophilic and suitable for single or multiple dye loading.

**Table 1.** *VivoTag 645-MAL* Characteristics

| Property                     | Specification                            |
|------------------------------|--|
| MW (tris TEA salt)           | 1418 g mol <sup>-1</sup>                 |
| Absorbance max. <sup>1</sup> | 643 ± 3 nm                               |
| Emission max. <sup>1</sup>   | 660 ± 3 nm                               |
| Extinction (ε)               | 210,000 M <sup>-1</sup> cm <sup>-1</sup> |
| Purity <sup>2</sup>          | >90%                                     |
| Appearance                   | Royal Blue solid                         |

1. Absorbance and fluorescence emission maxima determined in 1x PBS.  
2. As determined by RP-HPLC and measuring absorbance at 645 nm.

**Figure 1.** Absorbance and fluorescence emission spectra of *VivoTag 645-MAL* in 1x PBS.



## NOTES:

- *PerkinElmer's VivoTag 645-MAL* is intended for research purposes only and is not for human use. It must be used by or directly under the supervision of a technically qualified individual experienced in handling potentially hazardous materials. Please read the Material Safety Data Sheet (MSDS) provided for this product.
- Several of *PerkinElmer's* products and product applications are covered by U.S and foreign patents and patents pending. Our products are not available for resale or other commercial uses without a specific agreement from *PerkinElmer*.

PerkinElmer, Inc.  
549 Albany Street  
Boston, MA 02118 USA  
P: (800) 762-4000 or (+1) 203-925-4602  
[www.perkinelmer.com/nenradiochemicals](http://www.perkinelmer.com/nenradiochemicals)

**For a complete listing of our global offices, visit [www.perkinelmer.com/ContactUs](http://www.perkinelmer.com/ContactUs)**

Copyright ©2010, PerkinElmer, Inc. All rights reserved. PerkinElmer® is a registered trademark of PerkinElmer, Inc.  
All other trademarks are the property of their respective owners.

