

# PROTEIN LABELING KIT

## VivoTag™ 680XL Protein Labeling Kit

PerkinElmer's VivoTag 680XL Protein labeling kit is designed for preparing fluorescently labeled antibodies, proteins or peptides for small animal *in vivo* imaging applications. Each kit contains our superior *in vivo* optimized VivoTag 680XL fluorophore and everything you need to carry out the reaction and purify the labeled product.

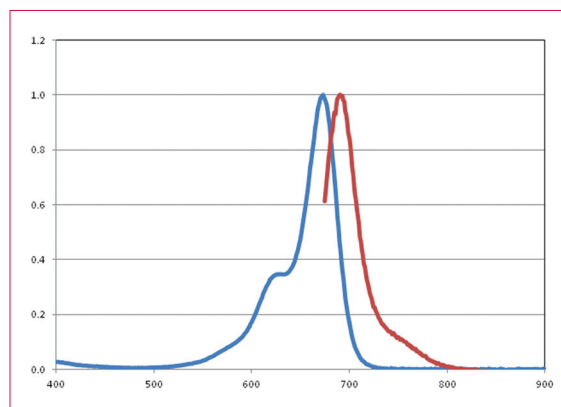
VivoTag dyes are used in PerkinElmer's *in vivo* fluorescence agents and have been optimized and validated for *in vivo* imaging on PerkinElmer's comprehensive array of imaging platforms. Label your proteins, antibodies or peptides with the fluorescent dye that in part made PerkinElmer's fluorescent agents the best-in-class for *in vivo* imaging.

VivoTag 680XL labeling kit offers key benefits for effective *in vivo* labeling of your protein.

- Label any protein, peptide or antibody. One kit labels up to 10 mg of protein offering greater flexibility in your model.
- VivoTag dyes are bright and extremely photostable for extended periods, providing more efficient labeling, and are designed and optimized for *in vivo* use.
- Use the dyes that have been validated and optimized on all of PerkinElmer's world renowned *in vivo* imaging systems.

### Labeling kit contents:

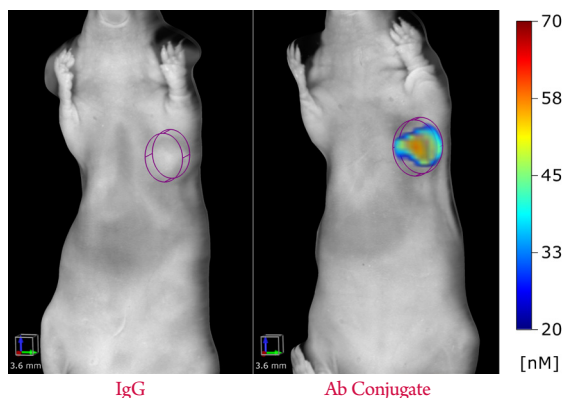
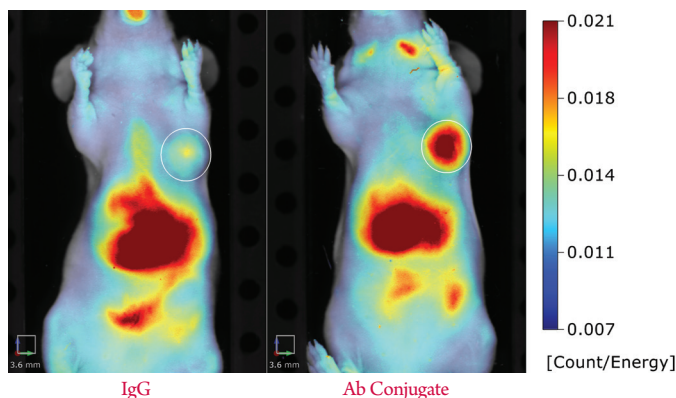
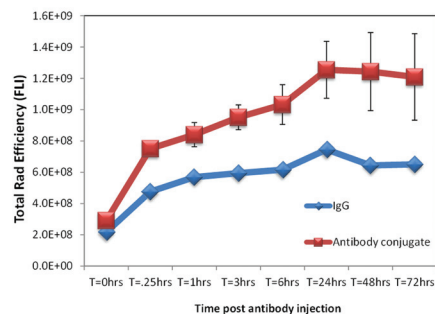
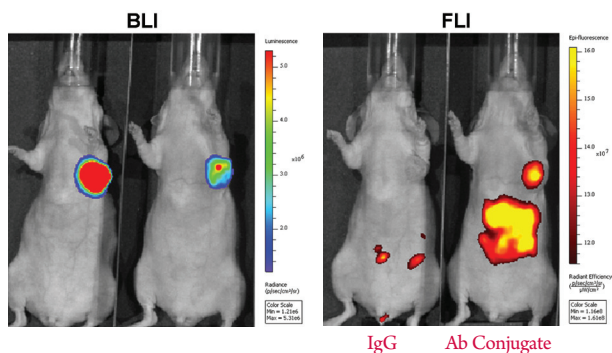
- 2 X 0.25 mg of VivoTag 680XL
- 1 X 1 mL of 1M solution of sodium bicarbonate (pH 8.3)
- 2 X Purification column
- 4 X 15 mL conical collection tube
- 1 X PBS (50 mL)



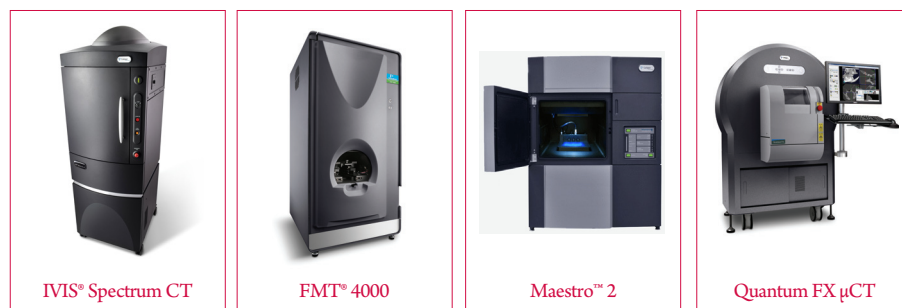
Absorbance and fluorescence emission spectra in 1 x PBS.

### Physical and Spectral Properties

PROPERTY	SPECIFICATION
MW of VivoTag 680XL	1856 g mol <sup>-1</sup>
Fluorescence Emission max	688 nm
Absorbance max	668 nm
Extinction	210,000 M <sup>-1</sup> cm <sup>-1</sup>
Purity	>95 %
Appearance	Blue solid



Tumor targeting of antibody conjugated with VivoTag 680XL utilizing the protein labeling kit. Nu/nu mice were injected with MDA-MB-231-luc2 orthotopically. Bioluminescence imaging (BLI) on the top shows similar tumor growth in both mice. 10  $\mu$ g of antibody specific to these tumors (n=3) and IgG (negative control) were conjugated with VivoTag 680XL. VivoTag antibody conjugates were injected intravenously and imaged at various time points using the IVIS Spectrum and FMT instrument. Fluorescence imaging (FLI) shows specific targeting to the tumor while no signal from the tumor is observed from IgG conjugated to VivoTag 680XL. The chart shows fluorescence signal expressed in total radiation efficiency from the tumor with IgG and tumor specific antibody. Bottom panel shows FMT images in reflectance (left) and tomography (right) mode. The high liver signal is due to the distribution kinetics of the antibody. Images shown are at 24 hours post injection of the antibody conjugate.



VivoTag dyes are optimized for use on all PerkinElmer *in vivo* imaging systems.

PerkinElmer *in vivo* imaging reagents are intended for animal research and not for use in humans.

Learn more at [www.perkinelmer.com/invivoreagents](http://www.perkinelmer.com/invivoreagents)

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