

Fluorescent Imaging Agent

Caution: For laboratory use only. This product is intended for animal research only and not for use in humans.

Name: VivoTrack 680
Product Number: NEV12000

DESCRIPTION

VivoTrack 680 is a near infrared fluorescent cell labeling agent that intercalates into the plasma membrane of primary cells and cell lines. Cells are brightly labeled and retain excellent viability and function, with the near infrared wavelength of the fluorescence offering optimal in vitro and in vivo detection.

CONTENTS

- Each vial contains 0.2 mg of labeling agent formulated in polyethylene glycol and is in dry solid form. .
- The packaged material in each vial provides sufficient reagent for up to 2×10^8 cells.

STORAGE & HANDLING

- Upon receipt, *VivoTrack 680* should be **IMMEDIATELY STORED AT 4 °C AND PROTECTED FROM LIGHT.**
- When stored and handled properly, *VivoTrack 680* in its dry solid form is stable for up to three months.
- Before opening the vial check to ensure that all of the solid material is at the bottom of the vial.
- After reconstituting with 1X PBS, gently swirl the solution to ensure that the solid is fully in solution.
- **Once reconstituted, *VivoTrack 680* is stable for up to 14 days when stored at 2-8 °C and protected from light.**
- Allow reconstituted *VivoTrack 680* imaging agent to equilibrate to room temperature before introducing into animals.

APPLICATIONS

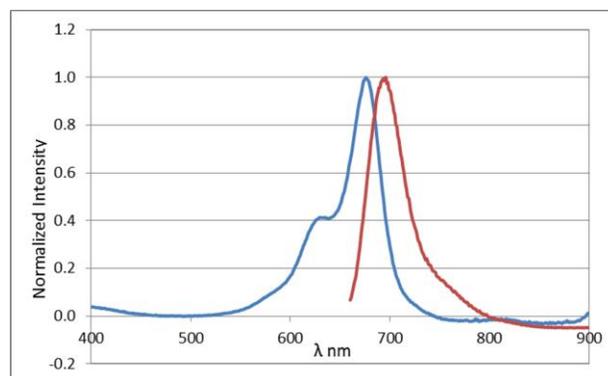
- Whole cell *in vitro* labeling of primary cells and cell lines for NIR fluorescence microscopy.
- Whole cell *in vitro* labeling of primary cells and cell lines for *in vivo* tracking by either *ex vivo* flow cytometry or *in vivo* noninvasive NIR fluorescence imaging.
- Whole cell *in vitro* labeling of tumor cells and cell lines for orthotopic implantation and *in vivo* noninvasive NIR fluorescence monitoring.

PHYSICAL AND SPECTRAL PROPERTIES

Property	Specification
MW	~1173 g mol ⁻¹
Fluorescence emission ¹	696 nm
Absorbance ¹	676 nm
Purity ²	>90 %
Appearance	Light blue solid

1. Absorbance and fluorescence maxima in ethanol.

2. As determined by RP-HPLC; measuring absorbance at 675 nm



Normalized absorbance (blue) and fluorescence emission (red) spectra of *VivoTrack 680* in ethanol

NOTES

- Caution: For laboratory use only. This product is intended for animal research only and not for use in humans. 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*.

General Protocol for Labeling Cells with VivoTrack 680

Materials

- VivoTrack 680 cell labeling agent
- 1x PBS

Procedure

1. Wash the cells of interest once with sterile PBS or serum-free medium to remove serum proteins and lipids that may interfere with cell labeling.
2. Discard the supernatant and resuspend the cells (up to 250×10^6 cells/mL) in 2.0 mL of PBS in a 50 mL sterile conical tube.
3. Dissolve VivoTrack 680 (0.2mg of dye in 1g of PEG) in 1.3 mL of warm sterile PBS (37 °C) and mix by vortex until completely dissolved. This will yield 2.0 mL of the labeling agent.
4. Add 2.0 mL of the cell labeling solution to 2.0 mL of cells, and mix immediately by gentle vortexing. [*Note: It may be required to optimize dose depending on the cells to be labeled.*]
5. Incubate the cells for 15 min at room temperature, protected from light.
6. Dilute the cells for washing by adding 15-20 mL sterile RT PBS containing 1% FBS or complete medium, depending on your ultimate use for the cells.
7. Wash the cells 3 times with RT PBS containing 1% FBS to remove excess cell labeling agent. A final resuspension with sterile PBS alone can be used to decrease the FBS levels in the cell preparation.
8. Count, culture, or transfer cells as required by the application.

VivoTrack 680 is highly soluble in aqueous solution and, thus, does not need to transition from organic to aqueous solution upon addition to the cell suspension. This allows quick dispersion into the cell medium, and very uniform cell labeling is generally achieved.