

Fluorescent Imaging Agent

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

Name: GFR-Vivo 680
Product Number: NEV30000

DESCRIPTION

GFR-Vivo 680 is a near infrared fluorescent inulin based agent that, in combination with fluorescence tomography heart imaging, enables quantitative assessment of renal Glomerular Filtration Rate, as an indicator of renal toxicity or injury.

CONTENTS

- Each vial contains 24 nmol of GFR-Vivo 680 in dry solid form. GFR-Vivo 680 has been filtered through a 0.2 µm filter prior to drying.
- Reconstitute GFR-Vivo 680 with 1.2 mL of 1X PBS before administering to animals.
- The packaged material provides sufficient reagent for imaging approximately 10 mice (weighing ~25 grams each) when using the recommended dose of 2 nmol (in 100 µL of PBS) of GFR-Vivo 680 per mouse.

STORAGE & HANDLING

- Upon receipt, GFR-Vivo 680 should be **IMMEDIATELY STORED AT 2-8 °C AND PROTECTED FROM LIGHT**.
- When stored and handled properly, GFR-Vivo 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, GFR-Vivo 680 is stable for up to 14 days when stored at 2-8 °C and protected from light.**
- Allow GFR-Vivo 680 imaging agent to equilibrate to room temperature before introducing into animals.

IN VIVO IMAGING AND APPLICATIONS

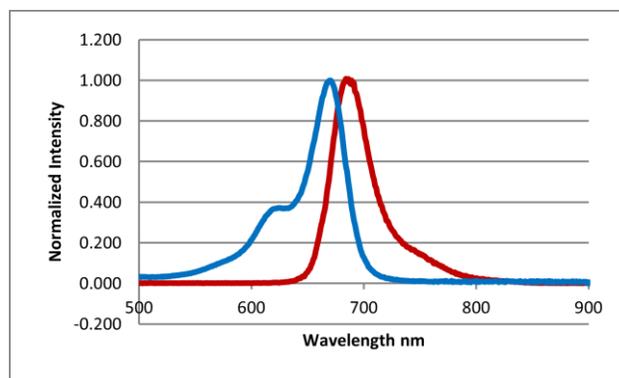
- The generally recommended procedure for in vivo imaging with GFR-Vivo 680 is administration via either tail vein intravenous injection or retro orbital injection and imaging the chest area immediately at various times points (1, 5, 15, 30, and 45 min) following injection.
- The blood half-lives of GFR-Vivo 680 in normal mice are approximately 0.5 and 8.0 min, respectively, for T_{1/2} Alpha and T_{1/2} Beta. Repeat injection and heart imaging may be performed as early as 24 hours for longitudinal studies, although there is longer term retention in the kidneys.
- GFR-Vivo 680 enables FMT heart imaging kinetics to predict blood concentrations of inulin and to calculate GFR in SKH-1E mice.
- Please refer to the application note for step by step protocol on using this agent on an FMT.

PHYSICAL AND SPECTRAL PROPERTIES

Property	Specification
MW	~6,000 g mol ⁻¹
Fluorescence emission ¹	690 nm
Absorbance ¹	670 nm
Purity ²	>90 %
Appearance	Blue solid

1. Absorbance and fluorescence maxima in 1x PBS.

2. As determined by RP-HPLC; measuring absorbance at 680 nm.



Normalized absorbance (blue) and fluorescence emission (red) spectra of GFR-Vivo 680 in 1x PBS

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.
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