

# Fluorescent Imaging Agent

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

## MMPSense™ 645 FAST

**Product Number: NEV10100**

**DESCRIPTION:** *MMPSense™ 645 FAST* a member of a family of activatable fluorescent imaging agents comprising a novel architecture termed F.A.S.T. (Fluorescent Activatable Sensor Technology), that confers an improved pharmacokinetic profile with earlier imaging time points. This architecture offers higher target specific signal with reduced background while also reducing the optimal imaging time after injection.

*MMPSense 645 FAST* is a matrix metalloproteinase (MMP) activatable agent that is optically silent upon injection and produces fluorescent signal after cleavage by disease related MMP's. Activation can occur by a broad range of MMP's including MMP 2, 3, 7, 9, 12, and 13. MMP activity is involved in many disease-related processes including cancer progression, invasion and metastasis, rheumatoid arthritis, pulmonary diseases and areas of cardiovascular disease. *MMPSense 645 FAST* may be used to monitor the progression of these diseases or to evaluate the potential therapeutic efficacy of drugs targeting the underlying mechanisms involved in these diseases.

**MATERIAL:** (*Needs to be reconstituted*)

**CONTENTS:** Each vial contains 48 nmol of *MMPSense 645 FAST* in dry solid form. *MMPSense 645 FAST* has been filtered through a 0.2 µm filter prior to drying. Reconstitute *MMPSense 645 FAST* with 1.2 mL of 1 x PBS before injecting into animals. The packaged material provides sufficient reagent for imaging approximately 10 mice (weighing ~25 grams each) when using the recommended dose of 4 nmol (100 µL) of *MMPSense 645 FAST* per mouse.

**PROPERTIES:** The physical characteristics of *MMPSense 645 FAST* can be found in **Table 1** and **Figure 1**.

### STORAGE & HANDLING:

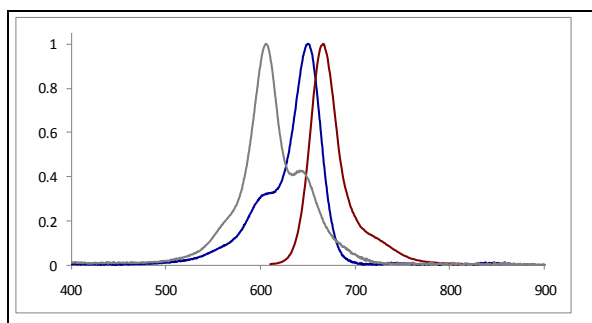
- Upon receipt, *MMPSense 645 FAST* should be **IMMEDIATELY STORED AT 2-8 °C AND PROTECTED FROM LIGHT**.
- When stored and handled properly, *MMPSense 645 FAST* is stable for up to 6 months in dry solid form from shipment date.
- Before opening the vial check to ensure that all of the solid material is at the bottom of the vial.
- After reconstituting with PBS, gently swirl the solution to ensure that the solid is fully in solution.
- **Once reconstituted with 1 x PBS, the solution is stable up to 10 days when stored at 2-8 °C and protected from light.**

**Table 1.** *MMPSense 645 FAST* Characteristics

Property	Specification
MW	~ 43,000 g mol <sup>-1</sup>
Fluorescence <sup>1</sup>	
• Excitation	649 nm
• Emission	666 nm
Absorbance <sup>1</sup>	649 nm (activated)
Purity <sup>2</sup>	>90%
Appearance	Blue solid

1. Absorbance and fluorescence maxima of *MMPSense 645 FAST* in 1x PBS.

2. As determined by RP-HPLC and measuring absorbance at 645 nm.



**Figure 1.** Normalized absorbance (grey), excitation (blue) and fluorescence emission (red) spectra of *MMPSense 645 FAST* in 1x PBS.

## IN VIVO IMAGING AND APPLICATIONS:

- The generally recommended procedure for *in vivo* imaging with *MMPSense 645 FAST* is administration via intravenous injection and imaging **6-72 hours post injection**.
- *MMPSense 645 FAST* will clear from tissues after approximately 96 hours. Repeat injection and imaging may be performed every four days for longitudinal studies. It is recommended that a pre-injection baseline image be taken prior to reinjection and imaging.
- *MMPSense 645 FAST* enables imaging of tumors and inflammation in a broad range of oncology, pulmonary and cardiovascular applications.

## NOTES:

- *PerkinElmer's MMPSense 645 FAST* 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 with *PerkinElmer*.

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