TECHNICAL DATA SHEET

Fluorescent Imaging Agent

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

OsteoSense® 680 EX

Product Number: NEV10020EX

DESCRIPTION: *OsteoSense® 680 EX* is a fluorescent *in vivo* bisphosphonate imaging agent. *OsteoSense 680 EX* images areas of microcalcifications and bone remodeling and enables imaging of bone growth and resorption.

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

CONTENTS: Each vial contains 24 nmol of *OsteoSense 680 EX* as a lyophilized solid. The solution has been filtered (0.2µ) prior to lyophilization. Upon dilution with 1.2 mL of 1 x PBS, this material provides sufficient reagent for imaging approximately 10 mice (weighing ~25 grams each) when using the recommended dose of 2 nmol/100 µL 1xPBS of *OsteoSense 680 EX* per mouse.

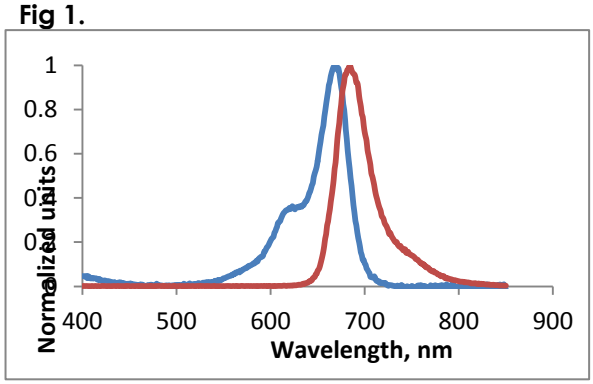
PROPERTIES: The physical properties of *OsteoSense 680 EX* can be found in **Table 1 and Figure 1.**

Table 1. *OsteoSense 680 EX* Properties

Property	Specification
MW (acid form)	1470.5 g mol^{-1}
Fluorescence[1]	
• Excitation	668 ±10 nm
• Emission max	687 ±10 nm
Absorbance[2] max	668 ±5 nm
Purity[3]	>95%
Appearance	Blue solid

1. Absorbance and fluorescence maxima of *OsteoSense 680 EX* in PBS.
2. Based on concentration resulting in absorbance of 0.3 to 0.5 AU.
3. As determined by RP-HPLC and measuring absorbance at 680 nm..

Fig 1.



Absorbance and fluorescence emission spectra in 1x PBS.

STORAGE & HANDLING:

- Upon receipt, *OsteoSense 680 EX* should be **IMMEDIATELY STORED AT 2-8 °C AND PROTECTED FROM LIGHT.**
- When stored and handled properly, *OsteoSense 680 EX* is stable for six months from date of shipment.
- Once reconstituted, the PBS solution is stable up to 10 days when stored at 2-8°C and protected from light.

IN VIVO IMAGING & APPLICATIONS:

- The recommended procedure for *in vivo* imaging with *OsteoSense 680 EX* is administration via tail vein injection and imaging 24 hours post tail vein injection.
- **Imaging Bone Growth**: *OsteoSense 680 EX* can be used to measure the effects of therapeutic stimulation of bone growth.
- **Imaging Bone Remodeling**: *OsteoSense 680 EX* can be used to characterize bone remodeling associated with animal models of arthritis.

SELECTED REFERENCES:

- Zaheer, A., Lenkinski, R.E., Mahmood, A., Jones, A.G., Cantley, L.C., Frangioni, J.V. In vivo near-infrared fluorescence imaging of osteoblastic activity. *Nature Biotechnology* **19**, 1148-1154 (2001)

NOTES:

- *PerkinElmer's OsteoSense 680 EX* 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 *Perkin Elmer*.

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