

Fluorescent Imaging Agent

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

OsteoSense® 750 EX

Product Number: NEV10053EX

DESCRIPTION: *OsteoSense*® 750 EX is a fluorescent *in vivo* bisphosphonate imaging agent. *OsteoSense* 750 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 48 nmol of *OsteoSense* 750 EX as a lyophilized solid. The solution has been filtered (0.2 μ) 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 4 nmol/100 μL 1xPBS of *OsteoSense* 750 EX per mouse.

PROPERTIES: The physical properties of *OsteoSense* 750 EX can be found in **Table 1** and **Figure 1**.

STORAGE & HANDLING:

- Upon receipt, *OsteoSense* 750 EX should be **IMMEDIATELY STORED AT 2-8 °C AND PROTECTED FROM LIGHT**.
- When stored and handled properly, *OsteoSense* 750 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:

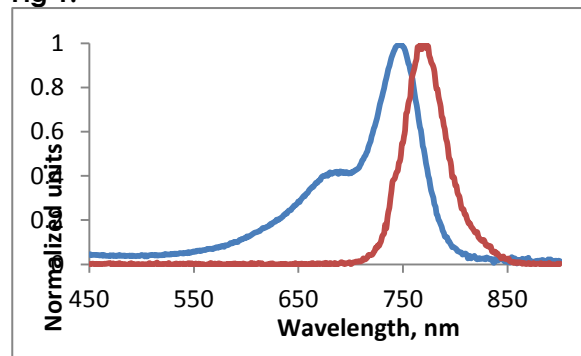
- The recommended procedure for *in vivo* imaging with *OsteoSense* 750 EX is administration via tail vein injection and imaging 24 hours post tail vein injection.
- **Imaging Bone Growth:** *OsteoSense* 750 EX can be used to measure the effects of therapeutic stimulation of bone growth.
- **Imaging Bone Remodeling:** *OsteoSense* 750 EX can be used to characterize bone remodeling associated with animal models of arthritis.

Table 1. *OsteoSense* 750 EX Properties

Property	Specification
MW (free acid)	1101.1 g mol ⁻¹
Fluorescence ¹	
• Excitation	749 ±10 nm
• Emission max	770 ±10 nm
Absorbance max ²	749 ±5 nm
Purity ³	>95%
Appearance	Blue solid

1. Absorbance and fluorescence maxima of *OsteoSense* 750 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 750 nm.

Fig 1.



Absorbance and fluorescence emission spectra in 1x PBS.

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 750 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.
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PerkinElmer, Inc.
549 Albany Street
Boston, MA 02118 USA
P: (800) 762-4000 or (+1) 203-925-4602
www.perkinelmer.com/nenradiochemicals

For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

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