

Fluorescent Imaging Agent

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

OsteoSense® 800

Product Number: NEV11105

DESCRIPTION: *OsteoSense*® 800 is a fluorescent *in vivo* diphosphonate imaging agent. OsteoSense 800 images areas of microcalcification and bone remodeling and enables imaging of bone growth and resorption.

MATERIAL (Needs to be reconstituted)

CONTENTS: Each vial contains 24 nmol of *OsteoSense* 800 in dried solid form. *OsteoSense* 800 solution has been filtered through a 0.2 µm filter. Reconstitute *OsteoSense* 800 with 1.2 mls of 1x 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 2 nmols (100 µL injection volume) of *OsteoSense* 800 per mouse.

PROPERTIES: The physical properties of *OsteoSense* 800 can be found in **Table 1** and **Figure 1**.

STORAGE & HANDLING:

- Upon receipt, *OsteoSense* 800 should be **STORED AT 2-8 °C AND PROTECTED FROM LIGHT**.
- When stored and handled properly, *OsteoSense* 800 is stable for up to 12 months in dry solid form.
- 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.**

IN VIVO IMAGING AND APPLICATIONS:

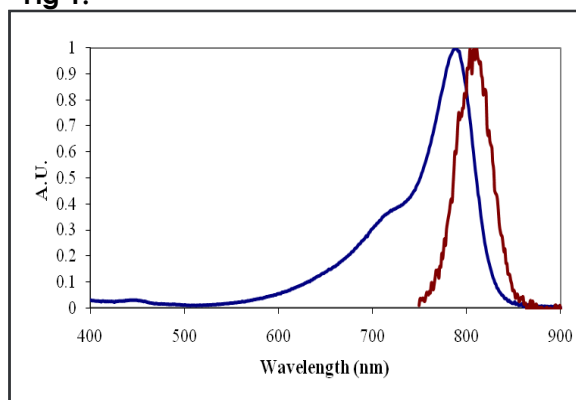
- The recommended procedure for *in vivo* imaging with *OsteoSense* 800 is administration via intravenous injection and **imaging 24 hours post injection**.
- *OsteoSense* 800 signal half-life in bone is 7-12 days

Table 1. *OsteoSense* 800 Properties

Property	Specification
MW	~ 1281 g mol ⁻¹
Fluorescence ¹	<ul style="list-style-type: none"> • Excitation 780 nm • Emission 805 nm
Absorbance	790 nm
Purity ²	>95 %
Appearance	Dark blue-green Solid

1. Absorbance and fluorescence maxima of *OsteoSense* 800 in PBS.
2. As determined by SE-HPLC and measuring absorbance at 750 nm.

Fig 1.



Absorbance and fluorescence emission spectra of *OsteoSense* 800 in 1x PBS.

- **Imaging Bone Growth:** *OsteoSense 800* can be used to measure the effects of therapeutic stimulation of bone growth.
- **Imaging Bone Remodeling:** *OsteoSense 800* 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 800* 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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