**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.

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**Table 1. OsteoSense 750 EX Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MW (free acid)</td>
<td>1101.1 g mol⁻¹</td>
</tr>
<tr>
<td>Fluorescence†</td>
<td></td>
</tr>
<tr>
<td>• Excitation</td>
<td>749 ±10 nm</td>
</tr>
<tr>
<td>• Emission max</td>
<td>770 ±10 nm</td>
</tr>
<tr>
<td>Absorbance max‡</td>
<td>749 ±5 nm</td>
</tr>
<tr>
<td>Purity‡</td>
<td>&gt;95%</td>
</tr>
<tr>
<td>Appearance</td>
<td>Blue solid</td>
</tr>
</tbody>
</table>

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.

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.

- 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*. 