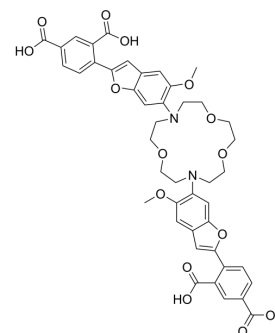


## SBFI

<b>Cat. No.:</b>	HY-D1760
<b>CAS No.:</b>	124549-08-2
<b>Molecular Formula:</b>	C <sub>44</sub> H <sub>42</sub> N <sub>2</sub> O <sub>15</sub>
<b>Molecular Weight:</b>	838.81
<b>Target:</b>	Fluorescent Dye
<b>Pathway:</b>	Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



## BIOLOGICAL ACTIVITY

<b>Description</b>	SBFI is a membrane-permeant, fluorescent Na <sup>+</sup> indicator dye. SBFI is excited at 340 nm and the fluorophore emission is collected at 450 nm <sup>[1]</sup> . SBFI selective for Na <sup>+</sup> over K <sup>+</sup> with K <sub>d</sub> values of 20 and 120 mM for these ions, respectively. <sup>[2]</sup>
<b>In Vitro</b>	<p>The SBFI dye for each sample was prepared by : <sup>[1]</sup></p> <ol style="list-style-type: none"> <li>1. dissolving the appropriate quantity of dye powder in 3 mL of dimethyl sulphoxide.</li> <li>2. The five solutions were agitated for 5 minutes.</li> <li>3. Each sample was then exposed to ultraviolet light with a Leitz Orthoplan microscope, and fluorescence levels recorded.</li> <li>4. Ten readings in total were achieved for each solution, agitating between readings.</li> <li>5. For each set of sample results the highest, lowest, and median values were plotted against dye concentration.</li> <li>6. From these tests the optimum fluorescence values, with minimum variation of upper and lower limits, was established with 50 g of SBFI dye.</li> </ol> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

## REFERENCES

- [1]. Leevess MA, The effect of mechanical deformation on the distribution of ions in fibroblasts. Am J Orthod Dentofacial Orthop. 1995 Jun;107(6):625-32.
- [2]. Minta A, Fluorescent indicators for cytosolic sodium. J Biol Chem. 1989 Nov 15;264(32):19449-57.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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