

## SBFI, AM

| Catalog Number | Packaging Size |
|----------------|----------------|
| C268           | 1 mg           |
| C269           | 20×50 µg       |

**Storage upon receipt:** -20°C, protected from light

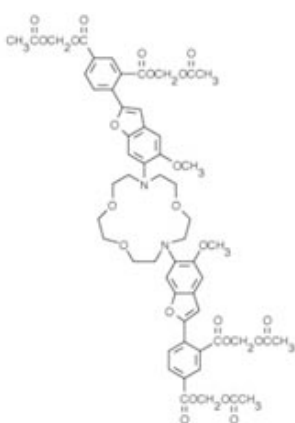
### Introduction

**SBFI, AM** is a cell-permeant sodium indicator, used to measure intracellular  $\text{Na}^+$  levels, to measure  $\text{Na}^+$  efflux in cells, and, in combination with other fluorescent indicators used to correlate changes in intracellular  $\text{Na}^+$  with  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$  concentrations, intracellular pH, and membrane potential. The spectral response of SBFI upon ion binding permit excitation ratio measurements.

The dissociation constant ( $K_d$ ) of SBFI for  $\text{Na}^+$  is 3.8 mM in the absence of  $\text{K}^+$ , and 11.3 mM in solutions with a combined  $\text{Na}^+$  and  $\text{K}^+$  concentration of 135 mM (which approximates physiological ionic strength). SBFI is ~18-fold more selective for  $\text{Na}^+$  than for  $\text{K}^+$ .

**SBFI, AM** is supplied as 1 mg package (**Cat No. C268**), as well as special packaging 20×50 µg (**Cat No. C269**).

### Specifications

|                            |                           |                                                                                      |
|----------------------------|---------------------------|--------------------------------------------------------------------------------------|
| <b>Label:</b>              | SBFI                      |  |
| <b>Ex/Em:</b>              | 340, 380/500 nm           |                                                                                      |
| <b>Detection Method:</b>   | Fluorescent               |                                                                                      |
| <b>Solubility:</b>         | DMSO, DMF                 |                                                                                      |
| <b>Molecular Weight:</b>   | 1127.07                   |                                                                                      |
| <b>CAS Number:</b>         | 129423-53-6               |                                                                                      |
| <b>Storage Conditions:</b> | -20°C, protect from light |                                                                                      |
| <b>Shipping Condition:</b> | Room Temperature          |                                                                                      |

### Applications

Sodium indicator

## References:

1. Selective decontamination of the digestive tract attenuated the myocardial inflammation and dysfunction that occur with burn injury. Selective decontamination of the digestive tract attenuated the myocardial inflammation and dysfunction that occur with burn injury. Horton JW, Tan J, White DJ, Maass DL, Thomas JA  
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2. Measurements of Cytosolic Sodium in Vascular Smooth Muscle Using the Fluorescent Dye Technique: Evidence for Reduced  $[Na^+]_i$  in Primary Hypertension. Measurements of Cytosolic Sodium in Vascular Smooth Muscle Using the Fluorescent Dye Technique: Evidence for Reduced  $[Na^+]_i$  in Primary Hypertension.  
Collery EdsP, Libbey M  
Metal Ions in Biology and Medicine, Collery P, Ed. 1994; (na):na pp. 539-544
3. Optical Imaging of Ion Transport in Single Living Cells. Optical Imaging of Ion Transport in Single Living Cells.  
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