

Product Data Sheet

Product Name: SBFI AM

Cat. No.: GC44876

Chemical Properties

Cas. No. 129423-53-6

Chemical Name 4,4'-[1,4,10-trioxa-7,13-diazacyclopentadecane-7,13-diylbis(5-methoxy-6,2-benzofurand iyl)]bis-1,3-benzenedicarboxylic acid 1,1',3,3'-tetrakis[(acetyloxy)methyl] ester

SMILES O=C(OCOC(C)=O)C(C=C1)=CC(C(OCOC(C)=O)=O)=O=C1C2=CC(C=C3OC)=C(O2)C=C3N4CCOCCOCCN(C5=C(OC)C=C(C=C(C6=C(C(OCOC(C)=O)=O)C=C(C(OCOC(C)=O)=O)C=C6)O7)C7=C5)CCOCC4

Formula C₅₆H₅₈N₂O₂₃

M.Wt 1127.1

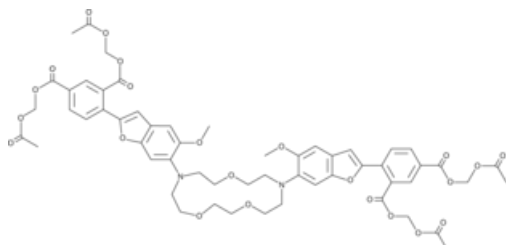
Solubility Methanol: Soluble

Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

SBFI AM is a membrane-permeant, fluorescent Na⁺ indicator dye. It is selective for Na⁺ over K⁺ with K_d values of 20 and 120 mM for these ions, respectively. [1] Increasing concentration of Na⁺ increases the ratio of excitation efficiency at 330-345 nm to that at 370-390 nm with emission collected at 450-550 nm. [1] Therefore, ratio fluorometry and imaging can be performed with the same wavelengths. SBF AM is suitable for single intracellular dye injection and is typically used for high-resolution measurements of Na⁺ concentration in intact tissue through two-photon confocal imaging.[2]

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

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Reference:

- [1]. Minta, A., and Tsien, R.Y. Fluorescent indicators for cytosolic sodium. *The Journal of Biological Chemistry* 264(32), 19449-19457 (1989).
- [2]. Meier, S.D., Kovalchuk, Y., and Rose, C.R. Properties of the new fluorescent Na⁺ indicator CoroNa Green: Comparison with SBFI and confocal Na⁺ imaging. *Journal of Neuroscience Methods* 155(2), 251-259 (2006).

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