

Product Name: Di 4 ANEPPS

Catalog No.: 7324

Batch No.: 2

CAS Number: 90134-00-2

IUPAC Name: 6-[2-(*N,N*-Dibutylamino)naphthyl]ethenyl-4'-pyridinium propanesulfonate

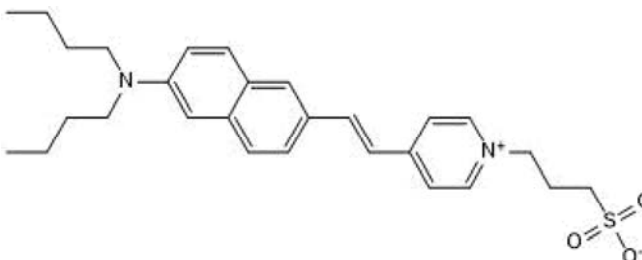
1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₈H₃₆N₂O₃S

Batch Molecular Weight: 480.67

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.0% purity at 254 nm

UV Spectrum: Consistent with structure

λ_{max}: 497 nm (Methanol)

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Di 4 ANEPPS is a voltage-sensitive dye, also known as an electrochromic probe, which fluoresces in response to change in electrical potential across a cellular membrane. Di 4 ANEPPS fluoresces only when membrane bound; change in electrical potential causes an intramolecular charge transfer and blue-shift in the excitation spectra. Di 4 ANEPPS is commonly used to detect transient changes in membrane potential in excitable cells such as neurons and cardiac cells. Excitation ratio measurements can be used to determine membrane potential. In model phospholipid membranes Ex/Em maxima are 465/635 nm, however spectral properties are highly depend... Please see product specific page on www.tocris.com for full description.

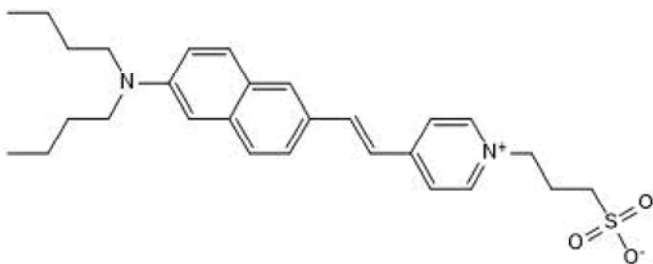
Physical and Chemical Properties:

Batch Molecular Formula: C₂₈H₃₆N₂O₃S

Batch Molecular Weight: 480.67

Minimum Purity: ≥90%

Batch Molecular Structure:



References:

Tominga & Tominga (2013) A new non-scanning confocal microscopy module for functional voltage-sensitive dye and Ca²⁺ imaging of neuronal circuit activity. *J.Neurophysiol.* **110** 553. PMID: 23615547.

Asamoah et al (2003) A fluorometric approach to local electric field measurements in a voltage-gated ion channel. *Neuron.* **37** 85. PMID: 12526775.

Loew et al (1992) A naphthyl analog of the aminostyryl pyridinium class of potentiometric membrane dyes shows consistent sensitivity in a variety of tissue, cell, and model membrane preparations. *J.Membr.Biol.* **130** 1. PMID: 1469705.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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