

Product Information

Di-4-ANEPPS

Catalog Number: D4011

Product Size: 5 mg

Parameters

Appearance: Orange red solid soluble in DMF, ethanol or DMSO

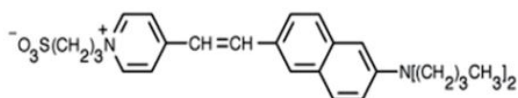
$\lambda_{Ex}/\lambda_{Em}$ (MeOH) = 496/705 nm

CAS No.: 90134-00-2

Molecular Formula: $C_{28}H_{36}N_2O_3S$

Molecular Weight: 481

Molecular Structure:



Storage

Store at 4°C and protect from light. When stored as directed, product is stable for at least 12 months.

Description

ANEP dyes are molecules that fluoresce in response to electrical potential changes in their environment. These are fast-response probes that operate by means of a change in their electronic structure, and consequently their fluorescence properties, in response to a change in the surrounding electric field. Their optical response is sufficiently fast to detect transient (millisecond) potential changes in excitable cells, including single neurons, cardiac cells, and intact brains. However, the magnitude of their potential-dependent fluorescence change is often small; fast-response probes typically show a 2-10% fluorescence change per 100 mV.

Furthermore, these dyes display a potential-dependent shift in their excitation spectra, thus permitting the quantitation of membrane potential using excitation ratio measurements. Di-4-ANEPPS is internalized in cells rapidly, so it is mainly used for short-term experiments.

Protocol

1. Configure DMSO or ethanol storage solution: Use DMSO or ethanol to configure the storage solution at a concentration of 1-10 mM.

Note: Store unused stock solution separately at -20 °C to avoid repeated freeze-thaw cycles.

2. Preparation of working solution: Dilute the stock solution with a suitable buffer (such as serum-free medium, HBSS or PBS) to prepare a working solution with a concentration of 10-15 μ M. Note: The final concentration of the working solution is recommended to be optimized according to different experimental systems. It is recommended to start the exploration of the optimal concentration from the range of 10 times the recommended concentration.

Notes

1. There are quenching problems with fluorescent dyes. Please avoid light to slow down the fluorescence quenching.
2. For your safety and health, please wear lab coats and disposable gloves.

