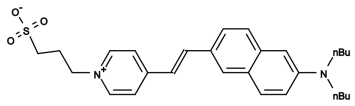
Di-4-ANEPPS *CAS#: 90134-00-2*

Catalog number: 21498
Unit size: 5 mg

Product Details

Storage Conditions	Freeze (<-15 °C), Minimize light exposure
Expiration Date	12 months upon receiving

Chemical Properties

Appearance	Red solid
Molecular Weight	480.66
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	482 nm
Emission Wavelength	686 nm

Applications

Potential-sensitive ANEP dyes are zwitterionic molecule, exhibiting the most consistent potentiometric response in different cell and tissue types. They can be introduced into cells by direct addition of stock solution to cell culture medium, by using Pluronic® F-127, or by retrograde labeling. ANEP dyes are non-fluorescent until bound to membranes, and their fluoresce responses to electrical potential changes in their environment. ANEP dyes 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.