# Di-8-ANEPPS *CAS#: 157134-53-7*

Catalog number: 21497
Unit size: 5 mg

## Product Details

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

## Chemical Properties

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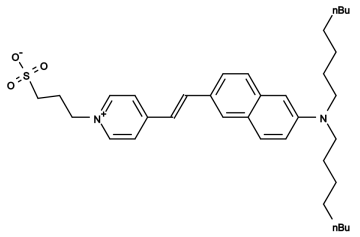
|---|---|
| Appearance | Red solid |
| Molecular Weight | 592.88 |
| Soluble In | DMSO |
| Chemical Structure |  |



## Spectral Properties

| | |
|---|---|
| Excitation Wavelength | 467 nm |
| Emission Wavelength | 631 nm |

## Applications

Di-8-ANEPPS is widely used for monitoring fast membrane potential changes. ANEP dyes belong to the class of the fast-response membrane potential dyes. Their optical response is fast enough to detect transient membrane potential changes in excitable cells where they demonstrate a membrane potential-dependent shift in excitation spectra. This feature allows the measurement of membrane potential changes by excitation ratio. These dyes are weakly fluorescent in aqueous media, and become strongly fluorescent upon binding to lipophilic environments (such as membranes). Di-8-ANEPPS is less susceptible for cellular internalization than other ANEP dyes probably due to its sulfonate group. In general, fast-response probes 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.