

MemBlaze® 640, deep-red fluorescent membrane probe

<http://www.lumiprobe.com/p/memblaze-640>

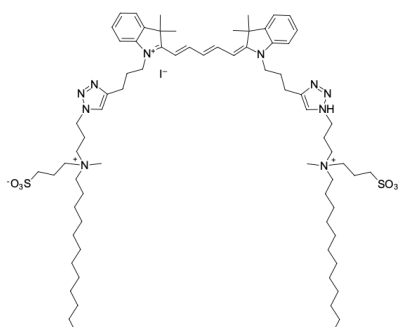
MemBlaze® 640 is a far-red fluorogenic plasma membrane probe, a member of the MEMBRIGHT® [1] family, designed for high-contrast labeling of live and fixed cells. The dye is based on a lipophilic cyanine scaffold bearing amphiphilic membrane-anchoring groups that facilitate rapid, selective insertion into lipid bilayers.

In aqueous media, MemBlaze® 640 forms weakly fluorescent aggregates. Upon interaction with biological membranes, fluorescence is strongly activated, providing bright, uniform plasma membrane staining with exceptionally low background. The fluorogenic mechanism enables wash-free protocols and high signal-to-noise ratios even at nanomolar working concentrations.

MemBlaze® 640 demonstrates minimal internalization under standard staining conditions and preserves membrane integrity. The probe exhibits high photostability and low cytotoxicity, making it suitable for long-term and time-lapse imaging experiments.

The dye is optimized for standard far-red filter sets (excitation ~650 nm, emission ~670-680 nm) and can be readily combined with other fluorescent probes for multicolor imaging using widefield, confocal, spinning disk, TIRF, and super-resolution microscopy.

[1] Cell Chem. Biol. 2019, 26, 4, 600-614.



Structure of MemBlaze 640

General properties

| | |
|---------------------|--|
| Appearance: | blue solid |
| Molecular weight: | 1423.86 |
| Molecular formula: | C ₇₃ H ₁₁₉ IN ₁₀ O ₆ S ₂ |
| Solubility: | DMSO, DMF |
| Quality control: | NMR ¹ H and HPLC-MS (95+%) |
| Storage conditions: | 24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate. |
| Legal statement: | This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products. |

Spectral properties

| | |
|------------------------------------|-----|
| Excitation/absorption maximum, nm: | 648 |
| Emission maximum, nm: | 669 |