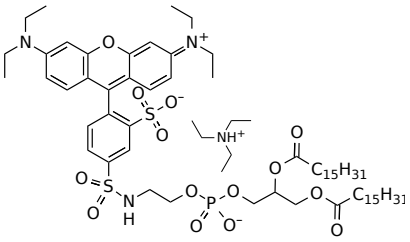
Rhodamine DHPE [Lissamine™ Rhodamine B 1,2-Dihexadecanoyl-sn-Glycero-3-Phosphoethanolamine, Triethylammonium Salt]

Catalog Number: 23306
Unit Size: 5 mg

Product Details

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

Chemical Properties

Appearance	Solid dark purple
Molecular Weight	1333.80
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	546 nm
Emission Wavelength	567 nm

Applications

Rhodamine DHPE (Lissamine™ rhodamine B 1,2-dihexadecanoyl-sn-glycero-3-phosphoethanolamine, triethylammonium salt) is a fluorescent phospholipid analog that integrates into lipid bilayers, offering a robust tool for investigating membrane dynamics, lipid-protein interactions, and lipid trafficking. The rhodamine fluorophore provides a high quantum yield, superior photostability, and strong emission in the orange-red spectral range, making it suitable for advanced imaging techniques, including confocal microscopy and flow cytometry.

Rhodamine DHPE is highly effective in model membrane systems, including liposomes and supported lipid bilayers, and is extensively applied in live-cell imaging to investigate complex biological processes. It has proven particularly valuable in fluorescence energy transfer (FRET) assays, where it acts as an energy acceptor in combination with NBD-PE as the donor, enabling detailed investigations of membrane fusion events. Furthermore, it has been utilized to monitor membrane trafficking during endocytosis, providing key insights into intracellular transport mechanisms.