Protonex™ Red 670 maleimide

Catalog Number: 21184
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid blue
Molecular Weight	853.05
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	643 nm
Emission Wavelength	660 nm

Applications

Protonex™ Red 670 maleimide is a highly effective tool for generating target-specific conjugates aimed at monitoring pH-dependent biological processes. This fluorophore demonstrates pH-sensitive fluorescence, with low intensity at basic pH and enhanced fluorescence at acidic pH. When conjugated to surface-bound receptors or antibodies, Protonex™ Red 670 remains non-fluorescent due to the neutral extracellular pH. Upon internalization through the endosomal pathway, where the pH becomes more acidic, the dye exhibits a significant increase in fluorescence intensity. Excitation at 632 nm (He-Ne laser) or 647 nm (red laser) induces red emission, making it ideal for tracking receptor or antibody activation and intracellular trafficking in live cells.

Protonex™ Red 670 maleimide is commonly employed for labeling biomolecules containing free thiol (SH) groups, including antibodies, proteins, thiol-modified oligonucleotides, and small-molecule ligands. Maleimide functional groups form stable thioether bonds with sulfhydryl groups, facilitating robust and consistent labeling of biomolecules for various experimental applications, including flow cytometry, fluorescence microscopy, and live-cell imaging.