Protonex™ Red 780 acid

Catalog Number: 21185
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid
Molecular Weight	857.18
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	748 nm
Emission Wavelength	769 nm

Applications

Protonex™ Red 780 works by changing its fluorescence intensity depending on the pH of the environment. Protonex™ Red 780 is minimally fluorescent at a basic pH and maximally fluorescent at an acidic pH. When Protonex™ Red 780 is bound to a receptor or an antibody on the cell surface, it is essentially non-fluorescent because the extracellular pH is neutral. However, when the receptor or antibody is internalized into the cell in response to a stimulus, it enters the endosomal pathway, where the pH is acidic. This causes Protonex™ Red 780 to become highly fluorescent and emit near-infrared light when excited by a red laser. By measuring the fluorescence intensity of Protonex™ Red 780, one can monitor the activation and trafficking of receptors or antibodies in live cells. Protonex™ Red 780 is especially useful in studying the activation and trafficking of G protein-coupled receptors (GPCRs), one of the most popular therapeutic drug targets. Protonex™ Red 780 can be used to label any receptor or epitope tag antibody and monitor its movement from the cell surface into acidic endosomes upon agonist stimulation. Protonex™ Red 780 might also be used to measure high-potency agonist and antagonist responses of different GPCRs in live cells.