XFD647 acid

Catalog Number: 1797
Unit Size: 10 mg

Product Details

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

Chemical Properties

Appearance	Solid blue
Molecular Weight	973.03
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	650 nm
Emission Wavelength	671 nm

Applications

XFD647, manufactured by AAT Bioquest, is a bright far-red flurosecent dye structurally similar to Alexa Fluor™ 647 (Thermo Fisher). It is efficiently excited by the 594 nm or 633 nm laser lines and is compatible with RFP filters like Cy5, making it well-suited for applications such as fluorescence microscopy and flow cytometry. XFD647 exhibits excellent aqueous solubility and pH stability across a wide range (pH 4–10), ensuring robust signal reproducibility under diverse experimental conditions. The dye enables high-degree conjugation to biomolecules with minimal self-quenching, resulting in enhanced fluorescence intensity and signal stability. Additionally, its high fluorescence quantum yield and superior photostability facilitate the sensitive detection of low-abundance targets, enhancing precision and sensitivity in quantitative fluorescence-based assays.

XFD647 acid is a non-reactive compound that can be employed as a reference standard in studies utilizing XFD647 conjugates. It is also suitable for use as a control in confocal microscopy, immunocytochemistry (ICC), high-content screening (HCS), flow cytometry, and live cell imaging applications. Furthermore, it can be utilized in the synthesis of activated esters and STP and can be coupled to hydrazines, hydroxylamines, or amines in aqueous solutions using water-soluble carbodiimides (e.g., EDAC). This allows for the conjugation of the dye to amino-containing molecules, such as proteins, antibodies, amine-modified oligonucleotides, and peptides.