

XFD750 TCO

Catalog Number: 1741

Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid green
Molecular Weight	1396.93
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	752 nm
Emission Wavelength	776 nm

Applications

XFD750, manufactured by AAT Bioquest, is a bright near-infrared fluorescent dye structurally similar to Alexa Fluor™ 750 (Thermo Fisher). It is efficiently excited by the 633 nm laser line and is compatible with the Cy7 filter set, making it well-suited for applications such as fluorescence microscopy and flow cytometry. The dye demonstrates excellent aqueous solubility and maintains pH stability across a broad range (pH 4–10), ensuring reliable and reproducible fluorescence signals under diverse experimental conditions. Its long-wavelength emission effectively reduces background autofluorescence, enhancing signal-to-noise ratios in complex biological samples, particularly in tissue imaging. Furthermore, XFD750 is widely utilized in stochastic optical reconstruction microscopy (STORM), providing exceptional performance in both dSTORM and nSTORM super-resolution imaging techniques.

XFD750 TCO is particularly useful for labeling tetrazine-modified biomolecules under copper-free conditions. It reacts with tetrazine-functionalized molecules, forming a stable conjugate via a dihydropyrazine moiety. This click reaction is favored over others due to its extremely fast kinetics and higher yields under mild reaction conditions, making it a popular choice for researchers.