XFD790 acid

Catalog Number: 70120
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	N/A
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	782 nm
Emission Wavelength	805 nm

Applications

XFD790, manufactured by AAT Bioquest, is a highly efficient near-infrared fluorescent dye that is structurally identical to Alexa Fluor™ 790 (ThermoFisher). Spectrally analogous to indocyanine green (ICG) and IRDye™ 800, XFD790 demonstrates exceptional aqueous solubility and sustained fluorescence stability over a broad pH range (pH 4–10), ensuring consistent and reproducible performance across diverse experimental conditions. Its long-wavelength emission effectively mitigates background autofluorescence, thereby enhancing signal-to-noise ratios in complex biological matrices, including tissue samples. As the longest-wavelength fluorophore in the XFD series, XFD790 offers superior spectral separation from widely used far-red fluorophores such as iFluor® 647, XFD647, and allophycocyanin (APC), facilitating precise multicolor fluorescence analyses. Furthermore, its optical properties make it an excellent candidate for small animal in vivo imaging (SAIVI) and two-color western blot applications using the LI-COR™ Odyssey™ infrared imaging system.

XFD790 acid is a non-reactive compound that can be employed as a reference standard in studies utilizing XFD790 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.