XFD660 NHS Ester

Catalog Number: 1834, 70091
Unit Size: 1 mg, 1 mg

Product Details

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

Chemical Properties

Appearance	Solid dark blue
Molecular Weight	1079.39
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	663 nm
Emission Wavelength	691 nm

Applications

XFD660, manufactured by AAT Bioquest, is a far-red fluorescent dye structurally similar to Alexa Fluor™ 660 (Thermo Fisher). The dye demonstrates high fluorescence quantum yield, photostability, and aqueous solubility, with pH-independent fluorescence across a broad range (pH 4–11), providing consistent performance across diverse experimental conditions.

XFD660 is optimized for red laser excitation and is compatible with flow cytometers equipped with spectral detection systems. It provides robust and uniform labeling with high signal intensity and reproducibility, making it ideal for fluorescence imaging, flow cytometry, and other analytical techniques. XFD660 demonstrates versatility in labeling a wide range of targets, including cell surface, intracellular, and intranuclear antigens. Its spectral properties position it between XFD647 and XFD700, making it a valuable intermediate fluorophore for constructing complex multicolor panels and enabling precise experimental designs in advanced research workflows.

The N-hydroxysuccinimidyl (NHS) ester of XFD660 is a widely used reagent for the conjugation of this dye to proteins or antibodies. NHS esters react selectively and efficiently with primary amines (such as the side chains of lysine residues or aminosilane-coated surfaces) at pH 7-9, forming stable covalent amide bonds. This property makes XFD660 NHS ester an excellent choice for labeling proteins, amine-modified oligonucleotides, and other amine-containing molecules.