XFD660 PEG4 DBCO

Catalog Number: 70096
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	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 DBCO derivative of XFD660 is a highly reactive cycloalkyne optimized for copper-free click chemistry (SPAAC, strain-promoted azide-alkyne cycloaddition). This derivative exhibits a significantly higher reaction rate with azides compared to other cyclooctynes and copper-catalyzed click reactions (CuAAC). Uniquely, DBCO does not react with tetrazines, allowing for its use in bioorthogonal reactions alongside trans-cyclooctenes and tetrazines. For applications where the presence of copper is problematic, XFD660 DBCO serves as an effective alternative to copper-dependent fluorescent alkynes.