

XFD610 PEG4 DBCO

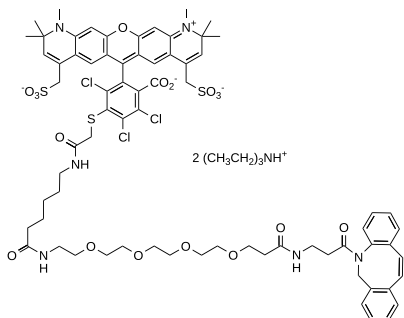
Catalog Number: 70066

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	1490.97
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	611 nm
Emission Wavelength	629 nm

Applications

XFD610, manufactured by AAT Bioquest, is a red-fluorescent dye that is structurally similar to Alexa Fluor™ 610 (Thermo Fisher). The dye exhibits high photostability and strong fluorescence, making it well-suited for advanced imaging applications and flow cytometry. Its water solubility and pH-independent fluorescence over a broad range (pH 4–10) ensure consistent performance under diverse experimental conditions. XFD610 enables reproducible labeling with high signal intensity, providing reliable results in fluorescence-based assays. Additionally, it serves as a robust alternative to Texas Red™, offering improved optical properties for experiments requiring enhanced fluorescence output.

The DBCO derivative of XFD610 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 cycloalkynes 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, XFD610 PEG4 DBCO serves as an effective alternative to copper-dependent fluorescent alkynes.