

XFD488 PEG4 DBCO

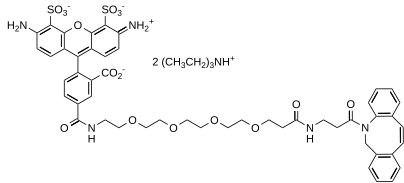
Catalog Number: 1813

Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid orange-red
Molecular Weight	1242.47
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	499 nm
Emission Wavelength	520 nm

Applications

XFD488, manufactured by AAT Bioquest, is structurally similar to Alexa Fluor® 488 (Thermo Fisher). XFD488 PEG4 DBCO is a green-fluorescent dye characterized by strong absorption, high photostability, and pH-stable fluorescence over a broad range (pH 4-11). The incorporation of a PEG4 linker enhances its aqueous solubility, and it is efficiently excited by the 488 nm line of an argon-ion laser. Its superior brightness and stability make it particularly well-suited for applications in both imaging and flow cytometry.

The DBCO derivative of XFD488 is a highly reactive cycloalkyne optimized for copper-free click chemistry (SPAAC, strain-promoted azide-alkyne cycloaddition). This derivative exhibits a higher reaction rate with azides compared to other cyclooctynes and traditional copper-catalyzed azide-alkyne cycloaddition (CuAAC). Importantly, DBCO does not react with tetrazines, making it compatible with bioorthogonal reactions involving trans-cyclooctenes and tetrazines. This feature allows XFD488 PEG4 DBCO to serve as an effective alternative to copper-dependent fluorescent alkynes in environments where copper ions may interfere with biological processes.