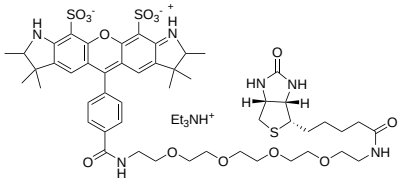
XFD532 PEG4 biotin conjugate

Catalog Number: 3110
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid red
Molecular Weight	1172.48
Soluble In	Water
Chemical Structure	

Spectral Properties

Excitation Wavelength	534 nm
Emission Wavelength	553 nm

Applications

The XFD532 PEG4 biotin conjugate incorporates the XFD532 fluorophore, which is structurally identical to Alexa Fluor 532 and efficiently excited at 532 nm. It exhibits strong orange fluorescence and high avidin-binding efficiency, closely resembling native biotin in affinity, rapid association, and non-cooperative binding to avidin and streptavidin tetramers. This conjugate is particularly well suited for the detection and quantification of biotin-binding sites on avidin, streptavidin, or neutravidin. In contrast to Biotin-4-fluorescein, which suffers from poor aqueous solubility, pH-dependent absorbance, and short-wavelength emission, the XFD532 PEG4 biotin conjugate is fully water soluble and maintains pH-independent fluorescence across the range of pH 4–10. The incorporation of a PEG4 linker between the biotin moiety and the fluorophore provides flexibility and spatial separation, minimizing steric hindrance and preserving efficient binding to biotin-binding proteins.