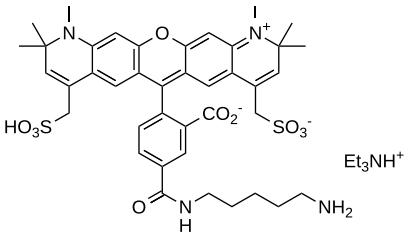
XFD594 amine

Catalog Number: 1715
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid blue
Molecular Weight	908.14
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	590 nm
Emission Wavelength	618 nm

Applications

XFD594, manufactured by AAT Bioquest, is structurally similar to Alexa Fluor™ 594 (Thermo Fisher). This bright red-fluorescent dye is efficiently excited by the 561 nm or 594 nm laser lines and is compatible with RFP filters like Texas Red. It demonstrates excellent solubility in aqueous solutions and is pH-insensitive across a broad range (pH 4–10), ensuring reliable and stable signal generation under diverse experimental conditions. XFD594 is particularly well-suited for multicolor fluorescence microscopy, flow cytometry, and advanced SRM imaging techniques like dSTORM, SIM, STED and TPE. It can be conjugated to proteins at high molar ratios with minimal self-quenching, resulting in brighter conjugates. Moreover, the superior fluorescence quantum yield and photostability of XFD594 make it ideal for detecting low-abundance biological targets, enabling greater precision and sensitivity in quantitative fluorescence assays.

XFD594 amine is a carbonyl-reactive building block for modifying carboxylic groups in the presence of activators such as EDC or DCC, or activated esters like NHS esters, through the formation of stable amide bonds. Additionally, it can be used as an amine donor for enzymatic transamination labeling.