

XFD514 TCO

Catalog Number: 70047

Unit Size: 1 mg

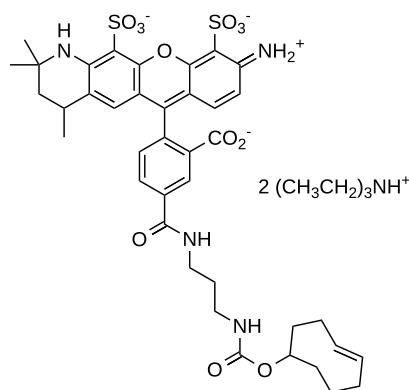
Product Details

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

Chemical Properties

Appearance	Solid
Molecular Weight	1027.30
Soluble In	DMSO

Chemical Structure



Spectral Properties

Excitation Wavelength	518 nm
Emission Wavelength	543 nm

Applications

XFD514, manufactured by AAT Bioquest, is a green-fluorescent dye structurally similar to Alexa Fluor™ 514 (Thermo Fisher). It is characterized by high photostability and exceptional brightness, making it highly suitable for advanced imaging and flow cytometry applications. The dye is water-soluble and remains pH-insensitive within a broad range (pH 4–10), ensuring consistent fluorescence performance across diverse experimental conditions. XFD514 offers robust and reliable labeling, enabling precise and reproducible results in fluorescence-based assays. It also serves as an effective replacement for rhodamine 6G in applications requiring enhanced performance.

XFD514 TCO is particularly useful for labeling tetrazine-modified biomolecules under copper-free conditions. It reacts with tetrazine-functionalized molecules, forming a stable conjugate via a dihydropyrazine moiety. This click reaction is favored over others due to its extremely fast kinetics and higher yields under mild reaction conditions, making it a popular choice for researchers.