

# XFD430 Tetrazine

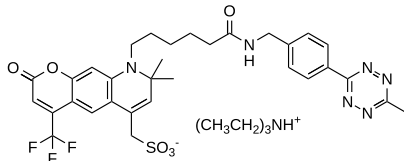
Catalog Number: 70028

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	787.90
Soluble In	DMSO
Chemical Structure	

## Spectral Properties

Excitation Wavelength	432 nm
Emission Wavelength	540 nm

## Applications

XFD430, manufactured by AAT Bioquest, is a green-fluorescent dye that is structurally similar to Alexa Fluor™ 430 (Thermo Fisher). With excitation and emission maxima at 432 nm and 540 nm, respectively, it is optimally excited by a 405 nm violet laser. Its large Stokes shift reduces spectral overlap with blue-emitting fluorophores, providing a superior signal-to-noise ratio in multiplexed fluorescence assays. XFD430 also exhibits good water solubility and remains pH-insensitive across a wide range (pH 4–10), making it well-suited for generating stable, reproducible fluorescence signals in both microscopy and flow cytometry applications.

XFD430 tetrazine is particularly useful for labeling TCO-modified biomolecules under copper-free conditions. It reacts with TCO-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.