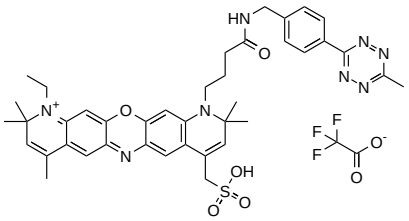
AATOM™ 700 Tetrazine

Catalog Number: 70307
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	862.93
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	699 nm
Emission Wavelength	715 nm

Applications

AATOM™ 700 is a near-infrared fluorescent dye characterized by its strong absorption, high photo and thermal stability, and good aqueous solubility. It is optimally excited within the 670-715 nm wavelength range. As a zwitterionic compound, AATOM™ 700 remains electrically neutral when conjugated to biomolecules or other substrates. Its strong electron-accepting properties result in efficient fluorescence quenching by electron donors such as guanine and tryptophan. These properties make AATOM™ 700 ideal for precise applications including single-molecule detection and super-resolution microscopy techniques like PALM, dSTORM, and STED. Furthermore, AATOM™ 700 is compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), and a variety of other biological assays, making it a versatile tool in advanced fluorescence-based research.

AATOM™ 700 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. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.