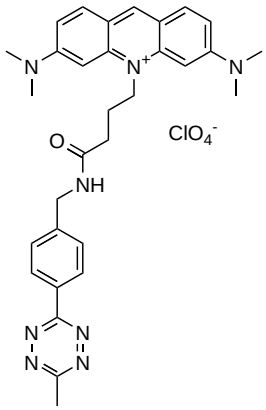
AATOM™ 495 Tetrazine

Catalog Number: 70227
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	635.12
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	497 nm
Emission Wavelength	525 nm

Applications

AATOM™ 495 is a green fluorescent dye derived from acridine orange, known for its strong absorption, high fluorescence quantum yield, excellent photostability, and superior thermal stability. It exhibits moderate hydrophilicity and is highly soluble in polar solvents such as DMF and DMSO, with an optimal excitation range of 465-510 nm. Notably, AATOM™ 495 exhibits intense and long-lived phosphorescence in solid matrices or at low temperatures. This dye is well-suited for advanced applications in single-molecule detection and high-resolution microscopy techniques, such as PALM, dSTORM, and STED microscopy. It is also compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), and a wide range of other biological assays.

AATOM™ 495 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.