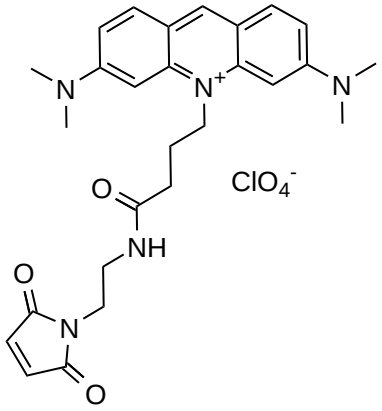
AATOM™ 495 maleimide

Catalog Number: 70222
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid orange
Molecular Weight	574.03
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.

The maleimide derivative of AATOM™ 495 is widely used for labeling biomolecules with free thiol (SH) groups, including antibodies, proteins, thiol-modified oligonucleotides, and low molecular weight ligands. Maleimides react readily with sulfhydryl groups, forming stable thio-ether bonds between the dye and the biomolecule, facilitating robust and reliable labeling for diverse experimental applications. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.