

AATOM™ 495 NHS ester

Catalog Number: 70221

Unit Size: 1 mg

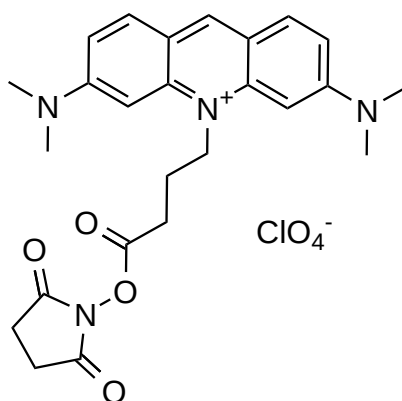
Product Details

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

Chemical Properties

Appearance	Solid orange
Molecular Weight	986.05
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.

NHS esters react selectively and efficiently with primary amines (such as the side chains of lysine residues or aminosilane-coated surfaces) at pH 7-9, forming stable covalent amide bonds. This property makes AATOM™ 495 NHS ester an excellent choice for labeling peptides and amine-modified oligonucleotides. For labeling antibodies and other proteins, we highly recommend our iFluor® dyes that are highly water soluble and are optimized for labeling proteins. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.