

AATOM™ 488 NHS ester

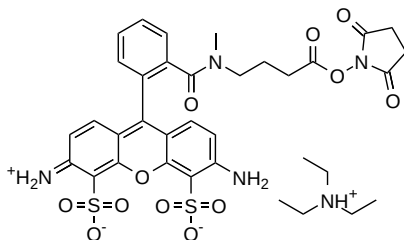
Catalog Number: 2815

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	787.86
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	499 nm
Emission Wavelength	520 nm

Applications

AATOM™ 488 is a hydrophilic, rhodamine-based fluorescent dye with exceptional water solubility. It is characterized by strong absorption, a high fluorescence quantum yield, and exceptional photostability, making it highly suitable for advanced fluorescence imaging techniques. The dye exhibits optimal excitation within the 480-515 nm wavelength range, aligning precisely with the 488 nm emission line of the Argon-Ion laser. AATOM™ 488 is particularly effective for single-molecule detection and super-resolution microscopy methods such as PALM, dSTORM, and STED. Moreover, it is well-suited for flow cytometry (FACS), fluorescence in situ hybridization (FISH), and other bioanalytical applications.

The N-hydroxysuccinimidyl (NHS) ester of AATOM™ 488 is a widely used reagent for the conjugation of this dye to proteins or antibodies. 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™ 488 NHS ester an excellent choice for labeling proteins, amine-modified oligonucleotides, and other amine-containing molecules. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.