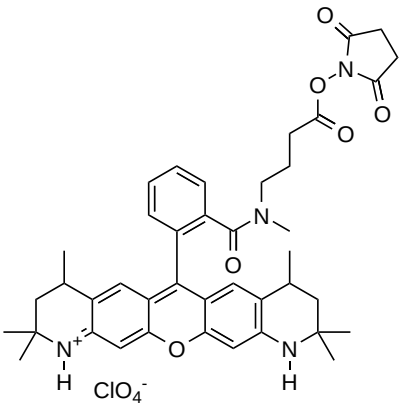
AATOM™ 550 NHS ester

Catalog Number: 70231
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid red
Molecular Weight	791.30
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	553 nm
Emission Wavelength	574 nm

Applications

AATOM™ 550 is an orange fluorescent dye chemically related to the well-known Rhodamine 6G and Rhodamine B dyes. It is characterized by a strong absorption, a high fluorescence quantum yield, and excellent photostability and thermal stability. This dye exhibits moderate hydrophilicity, with an optimal excitation range of 540-565 nm. AATOM™ 550 is cationic and carries a net electrical charge of +1 after coupling to a substrate. This dye is well-suited for advanced applications in single-molecule detection and high-resolution microscopy techniques, including PALM, dSTORM, and STED microscopy. It is also compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), and a variety of other biological assays. AATOM™ 550 can be used with excitation sources and fluorescence filters similar to those for Cy3® and TAMRA.

The N-hydroxysuccinimidyl (NHS) ester of AATOM™ 550 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™ 550 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.