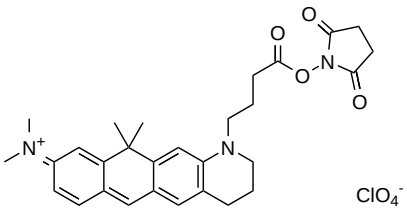
AATOM™ 610 NHS ester

Catalog Number: 70251
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	588.05
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	615 nm
Emission Wavelength	632 nm

Applications

AATOM™ 610 is a carbopyronin-based fluorescent dye known for its strong absorption, high fluorescence quantum yield, and exceptional photostability and thermal stability. It is moderately hydrophilic and optimally excited at wavelengths between 595 and 625 nm. Upon coupling to a substrate, AATOM™ 610 becomes cationic, carrying a net electrical charge of +1. The dye remains stable under physiological pH conditions and in buffers with a pH of up to 8, though it gradually degrades at higher pH levels. AATOM™ 610 is ideal 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), FRET, and various other biological assays.

The N-hydroxysuccinimidyl (NHS) ester of AATOM™ 610 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™ 610 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.