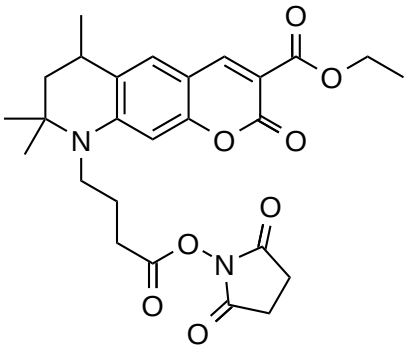
AATOM™ 425 NHS ester

Catalog Number: 70211
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid yellow-green
Molecular Weight	498.53
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	438 nm
Emission Wavelength	484 nm

Applications

AATOM™ 425 is a coumarin-based fluorescent dye characterized by its high fluorescence quantum yield, large Stokes shift, excellent photostability, and low molecular weight. It exhibits moderate hydrophilicity and is optimally excited in the 405-455 nm wavelength range. These properties make AATOM™ 425 particularly suitable for applications in single-molecule detection and high-resolution microscopy techniques, including PALM, dSTORM, and STED microscopy. Additionally, AATOM™ 425 is well-suited for use in flow cytometry (FACS), fluorescence in situ hybridization (FISH), and various other biological assays.

The N-hydroxysuccinimidyl (NHS) ester of AATOM™ 425 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™ 425 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.