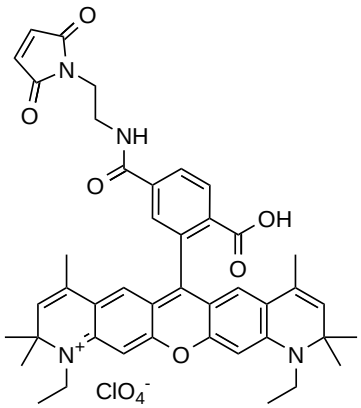
AATOM™ 590 maleimide

Catalog Number: 70242
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	813.30
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	592 nm
Emission Wavelength	621 nm

Applications

AATOM™ 590 is a rhodamine-based fluorescent dye characterized by its strong absorption, high fluorescence quantum yield, and excellent photostability and thermal stability. It exhibits moderate hydrophilicity and is optimally excited within the 575-610 nm wavelength range. AATOM™ 590 emits in the orange-red region of the visible spectrum, with fluorescence effectively quenched by BHQ®-2 dye. This dye is particularly suited for advanced applications in single-molecule detection and high-resolution microscopy techniques such as PALM, dSTORM, and STED microscopy. Additionally, it is compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), FRET, and various other biological assays. AATOM™ 590 is a suitable alternative to Alexa Fluor® 594 for these applications.

The maleimide derivative of AATOM™ 590 is widely used for labeling biomolecules with free thiol (SH) groups, including antibodies, proteins, thiol-modified oligonucleotides, and low molecular weight ligands. Maleimides react readily with sulfhydryl groups, forming stable thio-ether bonds between the dye and the biomolecule, facilitating robust and reliable labeling for diverse experimental applications. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.