

AATOM™ 550 maleimide

Catalog Number: 70232

Unit Size: 1 mg

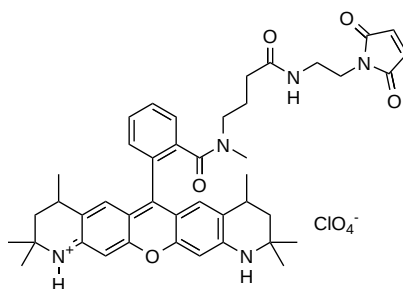
Product Details

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

Chemical Properties

Appearance	Solid red
Molecular Weight	816.35
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 maleimide derivative of AATOM™ 550 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.