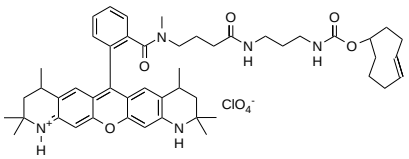
AATOM™ 550 TCO

Catalog Number: 70236
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	902.53
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.

AATOM™ 550 TCO is particularly useful for labeling tetrazine-modified biomolecules under copper-free conditions. It reacts with tetrazine-functionalized molecules, forming a stable conjugate via a dihydropyrazine moiety. This click reaction is favored over others due to its extremely fast kinetics and higher yields under mild reaction conditions, making it a popular choice for researchers. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.

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