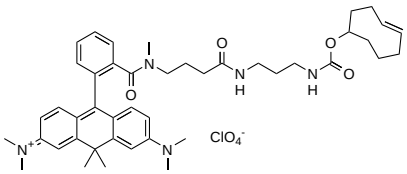
AATOM™ 620 TCO

Catalog Number: 70266
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	820.43
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	619 nm
Emission Wavelength	641 nm

Applications

AATOM™ 620 is a bright-red fluorescent dye, characterized by its strong absorption, exceptional photo and thermal stability, and temperature-dependent fluorescence. It demonstrates moderate hydrophilicity and optimal excitation within the 600-630 nm wavelength range. The dye maintains stable fluorescence over a wide pH range (2-11), allowing for its use in diverse experimental conditions. Upon conjugation to a substrate, AATOM™ 620 becomes cationic, carrying a net positive charge of +1. These properties make AATOM™ 620 particularly suitable for high-precision applications, including single-molecule detection and super-resolution microscopy techniques such as PALM, dSTORM, and STED. Additionally, it is compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), and various other biological assays.

AATOM™ 620 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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