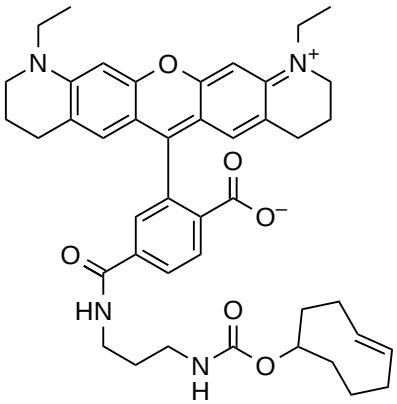
AATOM™ 565 TCO

Catalog Number: 2867
Unit Size: 1 mg

Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	24 months upon receiving

Chemical Properties

Appearance	Solid dark red
Molecular Weight	718.88
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	562 nm
Emission Wavelength	589 nm

Applications

AATOM™ 565 is a rhodamine-based fluorescent dye characterized by its strong absorption, high fluorescence quantum yield, and excellent thermal and photostability. It is optimally excited within the 545-575 nm wavelength range and emits in the orange-red region of the visible spectrum. This dye is particularly suited for advanced applications in single-molecule detection and high-resolution microscopy techniques such as PALM, dSTORM, and STED microscopy. It is also compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), FRET, and various other biological assays. However, due to its limited water solubility, AATOM™ 565 may be less ideal for aqueous-based applications. For these contexts, iFluor® 568 offers a viable alternative, providing similar spectral profiles with brighter fluorescence and improved aqueous compatibility.

AATOM™ 565 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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