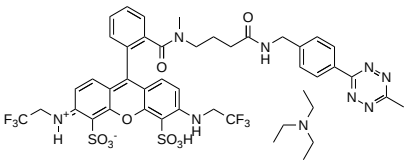
AATOM™ 514 Tetrazine

Catalog Number: 2849
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid orange-red
Molecular Weight	1038.05
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	511 nm
Emission Wavelength	531 nm

Applications

AATOM™ 514 tetrazine is particularly useful for labeling TCO-modified biomolecules under copper-free conditions, with the bright, green fluorescent AATOM™ 514 dye. It reacts with TCO-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.

AATOM™ 514 is a hydrophilic fluorescent dye characterized by excellent aqueous solubility, strong molar absorptivity, high fluorescence quantum yield, and notable thermal and photostability. These properties make it well-suited for advanced imaging techniques, including single-molecule detection and super-resolution microscopy methods such as PALM, dSTORM, and STED. AATOM™ 514 is also compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), and other fluorescence-based assays. The dye is optimally excited within the 510–535 nm range, with the 514 nm line of an Argon-Ion laser providing efficient excitation. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.