AATOM™ 514 BCN

Catalog Number: 70554
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Soldi
Molecular Weight	N/A
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	510 nm
Emission Wavelength	531 nm

Applications

AATOM™ 514 BCN is a clickable derivative of AATOM™ 514, a green fluorescent dye designed for labeling peptides, oligonucleotides, and other biomolecules. AATOM™ 514 is known for its strong absorption, high fluorescence quantum yield, and thermal and photo-stability. It exhibits excellent hydrophilicity and is optimally excited within the 510-535 nm range, making it a match for the 514 nm line of an Argon-Ion laser.

To improve conjugation performance, AATOM™ 514 BCN incorporates a PEG spacer, which reduces steric hindrance and minimizes potential interference with target binding sites. This design maximizes conjugation efficiency while preserving the biological activity of the resulting conjugate. The bicyclononyne (BCN) moiety enables strain-promoted azide–alkyne cycloaddition (SPAAC) with azido groups, forming stable triazole linkages under catalyst-free conditions. In addition, unlike dibenzocyclooctyne (DBCO), BCN also reacts efficiently with tetrazines through an inverse electron-demand Diels–Alder (IEDDA) reaction. This reaction is rapid, selective, and bioorthogonal, allowing labeling of biomolecules under physiological conditions without the need for metal catalysts or disruption of native biological processes.
This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.