AATOM™ 495 BCN

Catalog Number: 70553
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid
Molecular Weight	N/A
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	497 nm
Emission Wavelength	525 nm

Applications

AATOM™ 495 BCN is a clickable derivative of AATOM™ 495, a green fluorescent dye designed for labeling peptides, oligonucleotides, and other biomolecules. AATOM™ 495 is known for its strong absorption, high fluorescence quantum yield, excellent photostability, and superior thermal stability. It exhibits moderate hydrophilicity and is highly soluble in polar solvents such as DMF and DMSO, with an optimal excitation range of 465–510 nm. Notably, AATOM™ 495 exhibits intense and long-lived phosphorescence in solid matrices or at low temperatures.

To improve conjugation performance, AATOM™ 495 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.