AATOM™ 390 BCN

Catalog Number: 70550
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	390 nm
Emission Wavelength	475 nm

Applications

AATOM™ 390 BCN is a clickable derivative of AATOM™ 390, a blue fluorescent dye designed for labeling peptides, oligonucleotides, and other biomolecules. AATOM™ 390 is characterized by a high fluorescence quantum yield, a large Stokes shift, good photostability, and a low molecular weight. It exhibits moderate hydrophilicity and is optimally excited within the 360–410 nm range, with mercury arc lamps (emission lines at 365 nm and 405 nm) providing effective excitation.

To improve conjugation performance, AATOM™ 390 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.