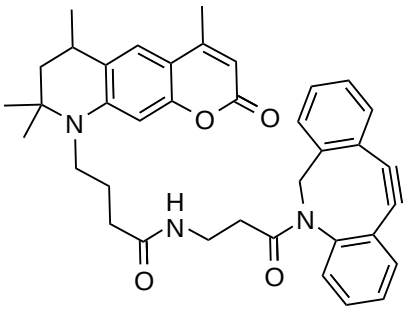
AATOM™ 390 DBCO

Catalog Number: 70205
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid off-white
Molecular Weight	601.75
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	390 nm
Emission Wavelength	475 nm

Applications

AATOM™ 390 is a coumarin-based fluorescent dye characterized by its high fluorescence quantum yield, large Stokes shift, good photostability, and low molecular weight. It exhibits moderate hydrophilicity and is optimally excited within the 360-410 nm range, with a mercury arc lamp (emission lines at 365 nm and 405 nm) serving as an effective excitation source. This dye is well-suited for applications in single-molecule detection and advanced high-resolution microscopy techniques, including PALM, dSTORM, and STED. Additionally, AATOM™ 390 is compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), and other diverse biological assays.

The DBCO derivative of AATOM™ 390 is a highly reactive cycloalkyne optimized for copper-free click chemistry (SPAAC, strain-promoted azide-alkyne cycloaddition). This derivative exhibits a significantly higher reaction rate with azides compared to other cyclooctynes and copper-catalyzed click reactions (CuAAC). Uniquely, DBCO does not react with tetrazines, allowing for its use in bioorthogonal reactions alongside trans-cyclooctenes and tetrazines. For applications where the presence of copper is problematic, AATOM™ 390 DBCO serves as an effective alternative to copper-dependent fluorescent alkynes.

This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.