

## AATOM™ 655 NHS ester

Catalog Number: 70281

Unit Size: 1 mg

### Product Details

---

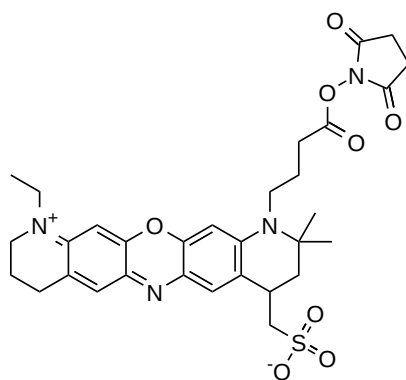
Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	12 months upon receiving

### Chemical Properties

---

Appearance	Solid dark blue
Molecular Weight	624.71
Soluble In	DMSO

Chemical Structure



### Spectral Properties

---

Excitation Wavelength	661 nm
Emission Wavelength	679 nm

### Applications

---

AATOM™ 655 is a far-red fluorescent dye characterized by its strong absorption, high photo and thermal stability, excellent ozone resistance and excellent water solubility. The dye exhibits moderate hydrophilicity and is optimally excited within the 640-660 nm wavelength range, which aligns with the 647 nm line of Krypton-Ion lasers and the 650 nm line of diode lasers. As a zwitterionic compound, AATOM™ 655 remains electrically neutral when conjugated to biomolecules or other substrates. Its strong electron-accepting properties result in efficient fluorescence quenching by electron donors such as guanine and tryptophan. These properties render AATOM™ 655 highly suitable for precise applications including single-molecule detection and super-resolution microscopy techniques like PALM, dSTORM, and STED. Furthermore, AATOM™ 655 is compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), and a variety of other biological assays, making it a versatile tool in advanced fluorescence-based research.

The N-hydroxysuccinimidyl (NHS) ester of AATOM™ 655 is a widely used reagent for the conjugation of this dye to proteins or antibodies. NHS esters react selectively and efficiently with primary amines (such as the side chains of lysine residues or aminosilane-coated surfaces) at pH 7-9, forming stable covalent amide bonds. This property makes AATOM™ 655 NHS ester an excellent choice for labeling proteins, amine-modified oligonucleotides, and other amine-containing molecules. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.