

## AATOM™ 620 NHS ester

Catalog Number: 70261

Unit Size: 1 mg

### Product Details

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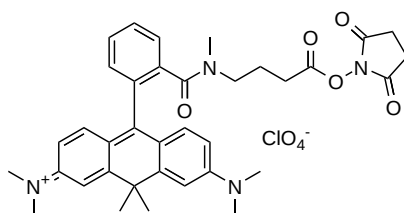
|                    |  |
|--------------------|--|
| Storage Conditions | Freeze (< -15 °C), Minimize light exposure |
| Expiration Date    | 12 months upon receiving                   |

### Chemical Properties

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|------------------|-----------------|
| Appearance       | Solid dark blue |
| Molecular Weight | 709.19          |
| Soluble In       | DMSO            |

Chemical Structure



### Spectral Properties

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|-----------------------|--------|
| Excitation Wavelength | 619 nm |
| Emission Wavelength   | 641 nm |

### Applications

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AATOM™ 620 is a bright-red fluorescent dye, characterized by its strong absorption, exceptional photo and thermal stability, and temperature-dependent fluorescence. It demonstrates moderate hydrophilicity and optimal excitation within the 600-630 nm wavelength range. The dye maintains stable fluorescence over a wide pH range (2-11), allowing for its use in diverse experimental conditions. Upon conjugation to a substrate, AATOM™ 620 becomes cationic, carrying a net positive charge of +1. These properties make AATOM™ 620 particularly suitable for high-precision applications, including single-molecule detection and super-resolution microscopy techniques such as PALM, dSTORM, and STED. Additionally, it is compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), and various other biological assays.

The N-hydroxysuccinimidyl (NHS) ester of AATOM™ 620 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™ 620 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.