

# AATOM™ 633 maleimide

Catalog Number: 70272

Unit Size: 1 mg

## Product Details

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Storage Conditions Freeze (&lt; -15 °C), Minimize light exposure

Expiration Date 12 months upon receiving

## Chemical Properties

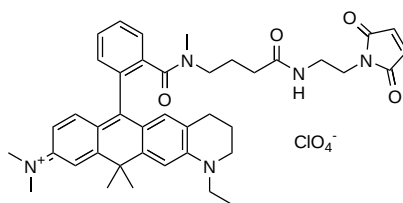
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Appearance Solid blue

Molecular Weight 774.31

Soluble In DMSO

Chemical Structure



## Spectral Properties

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Excitation Wavelength 629 nm

Emission Wavelength 651 nm

## Applications

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AATOM™ 633 is a bright-red fluorescent dye, characterized by its strong absorption, high fluorescence quantum yield, and exceptional photo and thermal stability. It exhibits moderate hydrophilicity and is optimally excited within the 610-645 nm wavelength range, compatible with both the 633 nm line of the He-Ne laser and the 635 nm line of the diode laser. 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™ 633 becomes cationic, carrying a net positive charge of +1. These properties make AATOM™ 633 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 maleimide derivative of AATOM™ 633 is widely used for labeling biomolecules with free thiol (SH) groups, including antibodies, proteins, thiol-modified oligonucleotides, and low molecular weight ligands. Maleimides react readily with sulfhydryl groups, forming stable thio-ether bonds between the dye and the biomolecule, facilitating robust and reliable labeling for diverse experimental applications. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.