# AATOM™ 594 acid

Catalog Number: 2858
Unit Size: 10 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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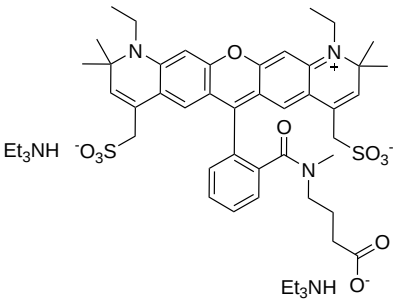
|---|---|
| Appearance | Solid blue |
| Molecular Weight | 1008.35 |
| Soluble In | DMSO |
| Chemical Structure |  |



## Spectral Properties

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|---|---|
| Excitation Wavelength | 602 nm |
| Emission Wavelength | 621 nm |

## Applications

AATOM™ 594 is a bright, red fluorescent dye characterized by a strong absorption, high fluorescence quantum yield, and exceptional thermal and photostability. The dye exhibits superior water solubility and hydrophilicity, facilitating its use in various aqueous environments. AATOM™ 594 is optimally excited within the 560-615 nm range, making it compatible with both 561 nm and 594 nm laser lines commonly used in advanced fluorescence imaging systems. Upon conjugation to biomolecules, AATOM™ 594 becomes anionic, carrying a net charge of -1, which may influence its binding characteristics and performance in assays. Its photostability and brightness make it particularly suited for high-resolution techniques like single-molecule detection and super-resolution microscopy, including PALM, dSTORM, and STED. Additionally, AATOM™ 594 is highly compatible with flow cytometry (FACS), fluorescence in situ hybridization (FISH), and various other fluorescence-based assays, supporting its broad utility in complex biological studies.

AATOM™ 594 acid is a non-reactive compound that can be employed as a reference standard in studies utilizing AATOM™ 594 conjugates. It is also suitable for use as a control in confocal microscopy, immunocytochemistry (ICC), high-content screening (HCS), flow cytometry, and live cell imaging applications. Furthermore, it can be utilized in the synthesis of activated esters and STP and can be coupled to hydrazines, hydroxylamines, or amines in aqueous solutions using water-soluble carbodiimides (e.g., EDAC). This allows for the conjugation of the dye to amino-containing molecules, such as proteins, antibodies, amine-modified oligonucleotides, and peptides. This product is manufactured by AAT Bioquest and is not affiliated with ATTO-TEC GmbH.