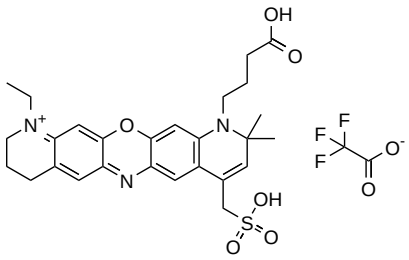
AATOM™ 680 acid

Catalog Number: 70290
Unit Size: 5 mg

Product Details

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

Chemical Properties

Appearance	Solid deep blue
Molecular Weight	639.64
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	679 nm
Emission Wavelength	696 nm

Applications

AATOM™ 680 is a far-red fluorescent dye characterized by its strong absorption, high photo and thermal stability, and good aqueous solubility. It is optimally excited within the 645-695 nm wavelength range, which aligns with the 670 nm line of diode laser and the 676 nm line of Krypton-Ion laser. As a zwitterionic compound, AATOM™ 680 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 make AATOM™ 680 ideal for precise applications including single-molecule detection and super-resolution microscopy techniques like PALM, dSTORM, and STED. Furthermore, AATOM™ 680 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.

AATOM™ 680 acid is a non-reactive compound that can be employed as a reference standard in studies utilizing AATOM™ 680 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.