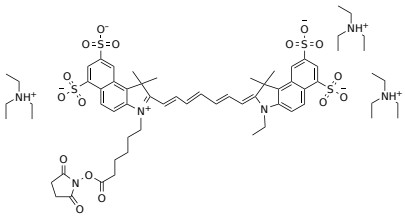
Cyanine 7.5 monosuccinimidyl ester [equivalent to Cy7.5® NHS ester]

Catalog Number: 168
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid
Molecular Weight	1343.73
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	785 nm
Emission Wavelength	801 nm

Applications

Cyanine dyes are widely utilized for labeling biological molecules, particularly peptides, proteins, and oligos, in fluorescence imaging and other fluorescence-based biochemical analyses. Among these, Cyanine 7.5 (Cy7.5) NHS ester is notable for its near-infrared (NIR) properties, exhibiting long-wave emission characteristics. The NHS ester (or succinimidyl ester) is favored for its efficient reaction with the primary amines of proteins (Lys), peptides, amine-modified oligonucleotides, and other amine-containing molecules. Cy7.5 NHS Ester allows for high molar ratios of labeling without significant self-quenching, leading to brighter NIR conjugates and improved detection sensitivity. These conjugates demonstrate pH insensitivity over a wide range of molar concentrations, ensuring consistent signal generation in imaging and flow cytometry applications. Moreover, the near-infrared emission of Cy7.5 enables deep tissue penetration, making it ideal for in vivo imaging and tracking distribution in organisms. AAT Bioquest offers cyanine dye NHS esters in triethylammonium salt form, which exhibit superior solubility in dimethyl sulfoxide (DMSO) and dimethylformamide (DMF) compared to potassium salt formulations offered by other vendors. The reactivity of the cyanine dye triethylammonium salts is equivalent to that of cyanine dye potassium salts, producing conjugates with identical properties.