

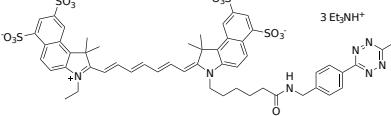
Cy7.5 tetrazine

Catalog Number: 909
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid dark green
Molecular Weight	1429.88
Soluble In	DMSO
Chemical Structure	 The chemical structure shows a Cy7.5 fluorophore (a substituted benzene ring with a quaternary ammonium group and two sulfonate groups) linked via a double bond to a tetrazine ring. The tetrazine ring is substituted with a 3-aminobenzyl group and a 3-ethylammonium cation (3 Et ₃ NH ⁺).

Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

Cy7.5 tetrazine is a conjugate formed by attaching a tetrazine molecule to the Cy7.5 fluorophore. This conjugate is particularly valuable in bioorthogonal labeling strategies, where it can react selectively and rapidly with a complementary molecule containing TCO, a strained alkene (typically trans-cyclooctene) in a reaction known as the inverse electron-demand Diels-Alder (IEDDA) reaction. The IEDDA reaction between Cy7.5 tetrazine and a strained alkene group allows for specific and efficient labeling of biomolecules without interfering with native biological processes. This labeling method has gained popularity in biochemistry, cell biology, and imaging studies due to its bioorthogonal nature and compatibility with living systems. Cy7.5 tetrazine can provide a valuable infrared fluorescent tool for labeling and tracking specific molecules or structures of interest. Its IR fluorescence properties also make it suitable for deep tissue imaging applications.