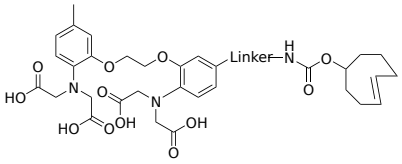
BAPTA TCO

Catalog Number: 20426
Unit Size: 1 mg

Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	24 months upon receiving

Chemical Properties

Appearance	Solid
Molecular Weight	671.70
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

BAPTA TCO is an excellent building block to introduce BAPTA calcium chelator into a biological molecule that contains a tetrazine group such as tetrazine-modified antibodies, proteins, peptides and oligos via TCO-tetrazine ligation. The TCO-tetrazine click reaction is a catalyst-free reaction. The reaction follows an inverse-electron demand Diels-Alder cycloaddition reaction of trans-cyclooctene (TCO) with tetrazine. The bioorthogonal reaction possesses exceptional kinetics (k > 800 M-1s-1) and selectivity. Such excellent reaction rate constants are unparalleled by any other bioorthogonal reaction pair. The TCO-tetrazine bioorthogonal reaction possesses extreme selectivity and biocompatibility, such that the complimentary reagents can form covalent bonds within richly functionalized biological systems, in some cases, living organisms. BAPTA (1,2-bis(o-aminophenoxy)ethane-N,N,N′,N′-tetraacetic acid) is a common calcium-specific chelator. The presence of four carboxylic acid functional groups makes BAPTA possibly binding two calcium ions. The extensive flexibility of the carboxylate ligands is critical to the coordination of calcium and other metal ions. BAPTA is commonly used to chelate Ca2+, similarly to EGTA.