

BAPTA Tetrazine

Catalog Number: 20427

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	731.72
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

BAPTA Tetrazine is an excellent building block to introduce BAPTA calcium chelator into a biological molecule that contains a TCO (trans-cyclooctene) group such as TCO-modified antibodies, proteins, peptides and oligos via TCO-tetrazine ligation. The TCO-tetrazine click reaction follows an inverse-electron demand Diels-Alder cycloaddition reaction of TCO with tetrazine. The bioorthogonal reaction possesses exceptional kinetics ($k > 800 \text{ M}^{-1}\text{s}^{-1}$) and selectivity. Such excellent reaction rate constants are unparalleled by any other bioorthogonal reaction pair. 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 Ca^{2+} , similarly to EGTA.