

Tide Quencher™ 3HWS Acid [TQ3HWS Acid]

Catalog Number: 2380

Unit Size: 5 mg

Product Details

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

Chemical Properties

Appearance	Solid
Molecular Weight	1052.13
Soluble In	DMSO

Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

The non-fluorescent Tide Quencher™ 3HWS Acid (TQ3HWS acid) is a next-generation, highly water-soluble quencher optimized for fluorescence-based applications, particularly in oligonucleotide and peptide labeling. As an advanced derivative of TQ3WS, it features significantly enhanced water solubility, enabling efficient labeling in aqueous environments with minimal organic solvent requirements. Like TQ3WS, TQ3HWS is designed to be a superior quencher for fluorophores such as TAMRA, Tide Fluor™ 3 (TF3), and Cy3, offering stronger absorption properties, higher quenching efficiency, and excellent solubility. The increased hydrophilicity of TQ3HWS acid further improves its applicability in biological and biochemical assays requiring stringent aqueous conditions. With its exceptional quenching performance, complete absence of background fluorescence, and excellent solubility, TQ3HWS provides a reliable and efficient solution for demanding fluorescence assays.

TQ3HWS acid is a non-reactive compound used as a reference standard or control in studies involving TQ3HWS-labeled conjugates. Additionally, it serves as a key precursor for the synthesis of activated esters and STP derivatives, facilitating further chemical modifications. In aqueous solutions, TQ3HWS acid can be conjugated to hydrazines, hydroxylamines, or amines through water-soluble carbodiimides, such as EDAC. This enables the attachment of the quencher to amino-containing biomolecules, including amine-modified oligonucleotides and peptides.