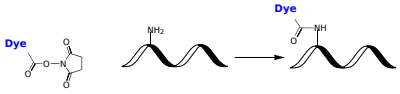
Tide Quencher™ 8WS succinimidyl ester [TQ8WS SE]

Catalog Number: 2135
Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid brown
Molecular Weight	962.15
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

Tide Quencher™ 8WS (TQ8WS) is a non-fluorescent molecule designed to efficiently quench the fluorescence of IR fluorophores such as ICG, iFluor® 820, iFluor® 840 and iFluor® 860. It has the longest absorption wavelength among all the commercial quenchers. TQ8WS is designed to be the most effective IR quencher with (a). much stronger absorption, and (b). much higher quenching efficiency for IR dyes. Tide Quencher™ 8WS succinimidyl ester is primarily used for the post-labeling of amino-modified oligonucleotides and the N-terminal or lysine residues of peptides. It can be used in techniques such as polymerase chain reaction (PCR), real-time PCR, and DNA sequencing. In these applications, fluorescence signals are used to monitor the amplification or detection of specific DNA sequences. TQ8WS quenches the fluorescent signal until a specific event (like DNA strand separation or primer extension) occurs, leading to an increase in fluorescence that can be detected and quantified. Fluorescence resonance energy transfer (FRET)-based assays are widely used to detect and measure the presence of specific molecules in a sample. They involve the use of a fluorescent molecule (fluorophore) and a quencher molecule such as TQ8WS. The fluorophore emits light when excited by a specific wavelength of light, while the quencher molecule absorbs this emitted light, effectively "quenching" the fluorescence signal.