

Tide Quencher™ 5.1WS maleimide [TQ5.1WS maleimide]

Catalog Number: 2086

Unit Size: 1 mg

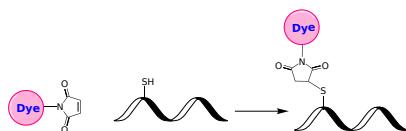
Product Details

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

Chemical Properties

| | |
|------------------|-----------------|
| Appearance | Solid dark blue |
| Molecular Weight | 1074.12 |
| Soluble In | DMSO |

Chemical Structure



Spectral Properties

| | |
|-----------------------|-----|
| Excitation Wavelength | N/A |
| Emission Wavelength | N/A |

Applications

Tide Quencher™ 5.1WS (TQ5.1WS) is a non-fluorescent molecule designed to efficiently quench the fluorescence of common NIR fluorophores such as Cy5, Cy5.5, Alexa Fluor® 647, Alexa Fluor® 647, iFluor® 647 and iFluor® 680. It is an improved version of TQ5 and QSY 21 and BHQ3. TQ5.1WS is designed to be a superior quencher with (a). much stronger absorption, and (b). much higher quenching efficiency. Tide Quencher™ 5.1WS maleimide is primarily used for the post-labeling of thiol-modified oligonucleotides and the Cys 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. TQ5.1WS 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 TQ5.1WS. 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.