

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

Catalog Number: 2089

Unit Size: 1 mg

Product Details

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

Chemical Properties

Appearance	Solid
Molecular Weight	989.06
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 Alkyne is an excellent building block for preparing TQ5.1WS-labeled probes from azido-modified oligonucleotides (including picolyl azide-modified oligonucleotides via the well-known click chemistry. 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.