

BiotinTEG Phosphoramidite

Catalog Number: 6223, 6224

Unit Size: 100 umoles, 500 mg

Product Details

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

Chemical Properties

Appearance	Solid
Molecular Weight	1010.24
Soluble In	MeCN

Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

BiotinTEG Phosphoramidite is a synthetic reagent utilized for the site-specific incorporation of biotin into oligonucleotides during solid-phase synthesis. The compound consists of a biotin moiety linked to a phosphoramidite functional group via a triethylene glycol (TEG) spacer. The TEG linker imparts increased solubility and conformational flexibility while minimizing steric hindrance, promoting efficient coupling and improved accessibility of the biotin group. This phosphoramidite is compatible with standard DNA and RNA synthesis chemistries and instrumentation, enabling reproducible 5'-end or internal biotin labeling under conventional coupling and deprotection conditions.

Biotin TEG Phosphoramidite is widely used for the synthesis of biotinylated oligonucleotides applied in affinity-based and analytical assays such as ELISA, surface plasmon resonance (SPR), quantitative PCR (qPCR), microarray hybridization, and bead-based capture systems. The hydrophilic, extended TEG spacer enhances the functional performance of biotin-streptavidin and related interactions by reducing steric constraints and ensuring optimal biotin presentation in downstream hybridization, immobilization, and biosensing applications.