

Aminopropargyl dCTP [5-Propargylamino-2'-deoxycytidine-5'-triphosphate]

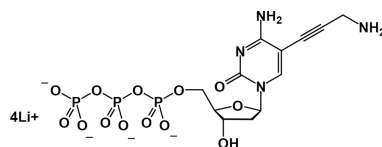
Catalog number: 17050
Unit size: 10 umoles

Product Details

Storage Conditions	Freeze (<math>< -15\text{ }^\circ\text{C}</math>), Minimize light exposure
Expiration Date	6 months upon receiving

Chemical Properties

Appearance	Colorless liquid
Molecular Weight	543.95
Soluble In	Water
Chemical Structure	



Applications

The amine-modified deoxycytidine 5'-triphosphates (such as 5-propargylamino-2'-deoxycytidine-5'-triphosphate) can be used to produce amine-containing DNA by conventional enzymatic incorporation methods such as reverse transcription, nick translation, random primed labeling, or PCR. Aminopropargyl dCTP can be readily incorporated into DNA through the conventional enzymatic incorporation techniques. The resulting amine-modified nucleic acids can then be labeled using any of amine-reactive fluorescent dyes, biotins and other amine-reactive reagents. The aminopropargyl-modified nucleotides can be incorporated to extremely high and consistent levels compared to the tag-labeled nucleotides that generally have higher stereo-hindrance. Subsequent reaction of the amine-modified nucleic acid with an excess of amine-reactive reagent achieves correspondingly high and consistent labeling efficiencies, regardless of the labeling reagent chosen. This two-step labeling method also eliminates the need to optimize an enzymatic reaction to accommodate different dye-modified nucleotides, which may incorporate at very different rates. This labeling method is widely used for both FISH probes and microarray-based experiments.