

Aminopropargyl dGTP [5-Propargylamino-2'-deoxyguanosine-5'-triphosphate]

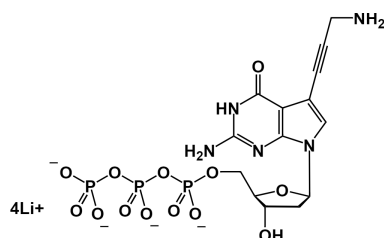
Catalog number: 17059
Unit size: 10 umoles

Product Details

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| Storage Conditions | Freeze (<15 °C), Minimize light exposure |
| Expiration Date | 6 months upon receiving |

Chemical Properties

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| Appearance | Colorless liquid |
| Molecular Weight | 582.99 |
| Soluble In | Water |
| Chemical Structure |  |



Applications

The amine-modified deoxyguanosine 5'-triphosphates (such as 5-propargylamino-2'-deoxyguanosine-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 dGTP 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 dGTP that generally has 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.