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## Product Data Sheet

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Product Name: 7-Deaza-GTP

Cat. No.: GB20109

### Chemical Properties

Cas. No.

Formula  $C_{11}H_{17}N_4O_{14}P_3$  (free acid) M.Wt 522.1 (free acid)

Solubility Storage Store at -20°C or below

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

7-Deaza-GTP is a monomeric raw material that can be used for nucleic acid synthesis<sup>[1]</sup>. 7-Deaza-GTP can improve the amplification of GC-rich DNA sequences in polymerase chain reaction (PCR)<sup>[2]</sup>. 7-Deaza-GTP can enhance amplification of long PCR products and of a random sequence DNA library<sup>[3]</sup>. 7-Deaza-GTP can be used during preparative-scale enzymatic synthesis of RNAs more than 30 nucleotides long and to abolish abrupt termination<sup>[4]</sup>.

References:

[1] Kuzmine I, Gottlieb P A, Martin C T. Structure in nascent RNA leads to termination of slippage transcription by T7 RNA polymerase[J]. Nucleic acids research, 2001, 29(12): 2601-2606.

[2] McConlogue L, Brow M A, Innis M A. Structure-independent DNA amplification by PCR using 7-deaza-2'-deoxyguanosine[J]. Nucleic acids research, 1988, 16(20): 9869.

[3] Musso M, Bocciardi R, Parodi S, et al. Betaine, dimethyl sulfoxide, and 7-deaza-dGTP, a powerful mixture for amplification of GC-rich DNA sequences[J]. The Journal of Molecular Diagnostics, 2006, 8(5): 544-550.

[4] Kuzmine I, Gottlieb P A, Martin C T. Binding of the priming nucleotide in the initiation

**Caution: Product has not been fully validated for medical applications. For research use only.**

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of transcription by T7 RNA polymerase[J]. Journal of Biological Chemistry, 2003, 278(5): 2819-2823.

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