

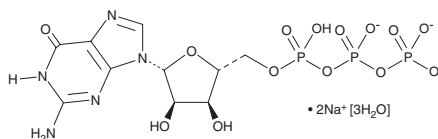
# PRODUCT INFORMATION



## Guanosine 5'-triphosphate (sodium salt hydrate)

Item No. 16060

**CAS Registry No.:** 56001-37-7  
**Formal Name:** guanosine 5'-(tetrahydrogen triphosphate), disodium salt, trihydrate  
**Synonym:** GTP  
**MF:**  $C_{10}H_{14}N_5O_{14}P_3 \cdot 2Na [3H_2O]$   
**FW:** 621.2  
**Purity:**  $\geq 90\%$   
**Supplied as:** A crystalline solid  
**Storage:**  $-20^{\circ}C$   
**Stability:**  $\geq 4$  years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Guanosine 5'-triphosphate (GTP) (sodium salt hydrate) is supplied as a crystalline solid. Aqueous solutions of GTP (sodium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of GTP (sodium salt hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

GTP acts as a substrate for the synthesis of RNA during the transcription process and the synthesis of DNA during DNA replication.<sup>1</sup> It is generated by the citric acid cycle and provides a source of energy for protein synthesis and gluconeogenesis, activating substrates in metabolic reactions.<sup>2</sup> GTP is essential for G protein-related signal transduction in second-messenger mechanisms where it is converted to GDP through the action of GTPases.<sup>3</sup>

### References

1. Ohta, T., Sarkar, S., and Thach, R.E. The role of guanosine 5'-triphosphate in the initiation of peptide synthesis. III. Binding of formylmethionyl-tRNA to ribosomes. *Proc. Natl. Acad. Sci. USA* **58(4)**, 1638-1644 (1967).
2. Hanson, R.W. and Garber, A.J. Phosphoenolpyruvate carboxykinase. I. Its role in gluconeogenesis. *Am. J. Clin. Nutr.* **25(10)**, 1010-1021 (1972).
3. Neer, E.J. G proteins: Critical control points for transmembrane signals. *Protein Sci.* **3(1)**, 3-14 (1994).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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