

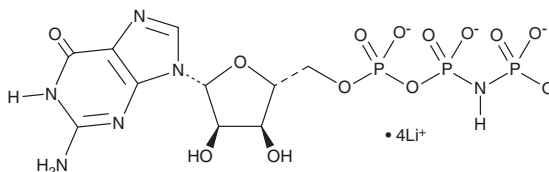
# PRODUCT INFORMATION



## Guanylyl Imidodiphosphate (lithium salt)

Item No. 16880

**CAS Registry No.:** 64564-03-0  
**Formal Name:** 5'-guanylic acid, monoanhydride with imidodiphosphoric acid, tetralithium salt  
**Synonym:** Guanosine 5'-[ $\beta,\gamma$ -imido] triphosphate  
**MF:**  $C_{10}H_{13}N_6O_{13}P_3 \cdot 4Li$   
**FW:** 545.9  
**Purity:**  $\geq 95\%$   
**UV/Vis.:**  $\lambda_{max}$ : 255 nm  
**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

Guanylyl imidodiphosphate (lithium salt) is supplied as a crystalline solid. Aqueous solutions of guanylyl imidodiphosphate (lithium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of guanylyl imidodiphosphate (lithium salt) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Guanylyl imidodiphosphate is a nonhydrolyzable analog of GTP that can bind to and irreversibly activate G proteins in the presence of  $Mg^{2+}$ .<sup>1</sup> This nucleotide is a potent stimulator of adenylate cyclase.<sup>2</sup> Guanylyl imidodiphosphate is used in studies of protein synthesis since the process of GTP binding, hydrolysis, and release is essential for the initiation of protein translocation across the endoplasmic reticulum.<sup>3</sup>

### References

1. Terry, B.J. and Purich, D.L. Assembly and disassembly properties of microtubules formed in the presence of GTP, 5'-guanylyl imidodiphosphate, and 5'-guanylyl methylenediphosphate. *J. Biol. Chem.* **255(21)**, 10532-10536 (1980).
2. Lefkowitz, R.J. and Caron, M.G. Characteristics of 5'-guanylyl imidodiphosphate-activated adenylate cyclase. *J. Biol. Chem.* **250(12)**, 4418-4422 (1975).
3. Rapoport, T.A. Transport of proteins across the endoplasmic reticulum membrane. *Science* **258(5084)**, 931-936 (1992).

#### 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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