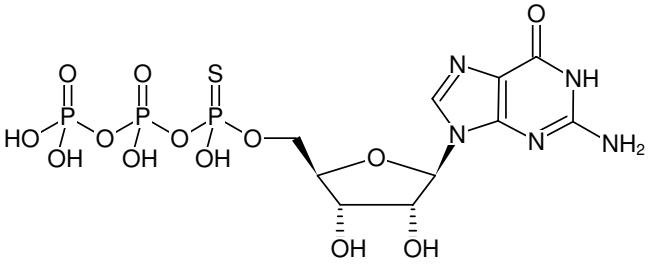
DATA SHEET

Jena Bioscience

GTPαS

Guanosine-5'-(α-thio)-triphosphate, Sodium salt; (1 : 1 Mixture of R_p and S_p isomers)

Cat. No.	Amount
NU-409S	25 µl (100 mM)
NU-409L	5 x 25 µl (100 mM)



Structural formula of GTPαS

For research use only!

Shipping: shipped on blue ice

Storage Conditions: store at -20 °C

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

Shelf Life: 12 months after date of delivery

Molecular Formula: $C_{10}H_{16}N_5O_{13}P_3S$ (free acid)

Molecular Weight: 539.24 g/mol (free acid)

Exact Mass: 538.97 g/mol (free acid)

CAS#: 81570-51-6

Purity: ≥ 95 % (HPLC)

Form: clear aqueous solution

Concentration: 100 mM - 110 mM

pH: 7.5 ±0.5

Spectroscopic Properties: λ_{max} 252 nm, ε 13.7 L $mmol^{-1}$ cm^{-1} (Tris-HCl pH 7.5)

Applications:
Stability against decapping scavenger pyrophosphatase[1]

Inhibition of guanylate cyclase[2]

Specific Ligands:

Translational factor eIF4E[1]

Bacterial diguanylate cyclase[3]

Selected References:

[1] Kowalska *et al.* (2009) Phosphorothioate analogs of m7GTP are enzymatically stable inhibitors of cap-dependent translation. *Bioorganic and Medicinal Chemistry Letters* **19**:1921.

[2] Garger *et al.* (2001) Inhibitors of guanylate cyclase inhibit phototransduction in limulus ventral photoreceptors. *Visual Neuroscience* **18**:625.

[3] Wassmann *et al.* (2007) Structure of BeF3-modified response regulator PleD: implications for diguanylate cyclase activation, catalysis and feedback inhibition. *Structure (London)* **15**:915.

Bao *et al.* (2008) Coordination of two sequential ester-transfer reactions: exogenous guanosine binding promotes the subsequent wG binding to a group I intron. *Nucleic Acids Research* **36 (21)**:6934.

Strobel (1999) A chemogenetic approach to RNA function/structure analysis. *Curr. Opin. Struc. Biol.* **9 (3)**:346.

Ryder *et al.* (1999) Nucleotide analog interference mapping. *Methods* **18 (1)**:38.

Antonny *et al.* (1993) GTP hydrolysis by purified alpha-subunit of transducin and its complex with the cyclic-GMP phosphodiesterase inhibitor. *Biochemistry-US* **32 (33)**:8646.