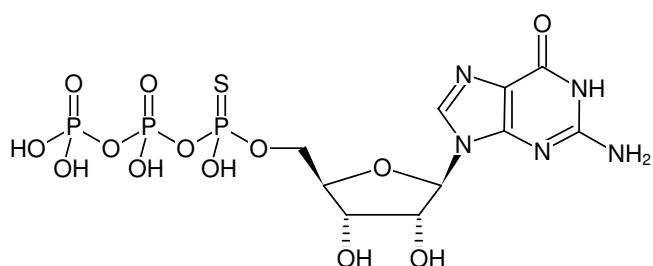


**GTPαS**Guanosine-5'-(α-thio)-triphosphate, Sodium salt; (Mixture of R_p and S_p isomers)

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



Structural formula of GTPαS

For general laboratory use.**Shipping:** shipped on gel packs**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:** C₁₀H₁₆N₅O₁₃P₃S (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:** solution in water**Color:** colorless to slightly yellow**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.