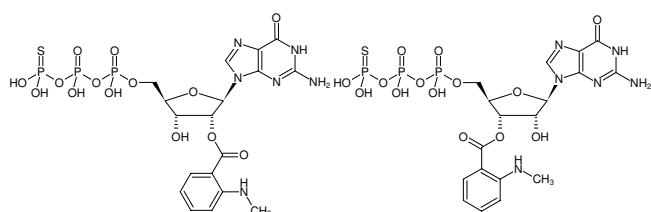




Mant-GTPyS

2'/3'-O-(N-Methyl-anthraniloyl)-guanosine-5'-(γ-thio)-triphosphate, Triethylammonium salt

Cat. No.	Amount
NU-209S	10 µl (10 mM)
NU-209L	5 x 10 µl (10 mM)



Structural formula of Mant-GTPyS

For general laboratory use.

Shipping: shipped on dry ice

Storage Conditions: store at -20 °C

Shelf Life: 6 months after date of delivery

Molecular Formula: C₁₈H₂₃N₆O₁₄P₃S (free acid)

Molecular Weight: 672.39 g/mol (free acid)

Exact Mass: 672.02 g/mol (free acid)

CAS#: 136749-24-1, 136749-26-3

Purity: ≥ 90 % (HPLC)

Form: solution in water

Color: colorless to slightly yellow

Concentration: 10 mM - 11 mM

pH: 7.5 ± 0.5

Spectroscopic Properties: λ_{max} 252/355 nm, ε 22.6/5.7 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5), λ_{exc} 355 nm, λ_{em} 448 nm

Applications:

Inhibition of AC5^[1], AC5^[2]

Specific Ligands:

Initiation factor eIF5B^[3]

Selected References:

[1] Rottlaender *et al.* (2007) Functional adenylyl cyclase inhibition in murine cardiomyocytes by 2 (3)-O- (N-methylanthraniloyl)-guanosine 5- (gamma-thio) triphosphate. *J. Pharmacol. Exper. Ther.* **321**:608.

[2] Gille *et al.* (2003) Mant-substituted guanine nucleotides: A novel class of potent adenylyl cyclase inhibitors. *Life Sciences* **74**:271.

[3] Pisareva *et al.* (2007) Kinetic analysis of the interaction of guanine nucleotides with eukariotic translation initiation factor eIF5B. *Biochemistry* **46**:2622.

Pinto *et al.* (2011) Structure-activity relationships for the interactions of 2'- and 3'- (O)- (N-methyl)anthraniloyl-substituted purine and pyrimidine nucleotides with mammalian adenylyl cyclases. *Molecular Pharmacology* **82** (4):358.

Hübner *et al.* (2011) Effect of MANT-nucleotides on L-type calcium currents in murine cardiomyocytes. *J. Naunyn Schmiedebergs Arch. Pharmacol.* **383** (4):573.

Erdorf *et al.* (2011) Pharmacological characterization of adenylyl cyclase isoforms in rabbit kidney membranes. *J. Naunyn Schmiedebergs Arch. Pharmacol.* **383** (4):357.

Spangler *et al.* (2011) Interaction of the diguanylate cyclase YdeH of *Escherichia coli* with 2', (3')-substituted purine and pyrimidine nucleotides. *J. Pharmacol. Exp. Ther.* **336** (1):234.

Koshiba *et al.* (2011) Structure-function analysis of the yeast mitochondrial Rho GTPase, Gem1p: implications for mitochondrial inheritance. *J. Biol. Chem.* **286** (1):354.

Goettle *et al.* (2009) Characterization of Mouse Heart Adenylyl Cyclase. *J. Pharmacol. Exp. Ther.* **329** (3):1156.

Hunn *et al.* (2008) Regulatory interactions between IRG resistance GTPases in the cellular response to *Toxoplasma gondii*. *The EMBO Journal* **27**:2495.

Villarroya *et al.* (2008) Characterization of Human GTPBP3, a GTP-Binding Protein Involved in Mitochondrial tRNA Modification. *Molecular and cellular biology* **28** (24):7514.

Herzig *et al.* (2007) Functional Adenylyl Cyclase Inhibition in Murine Cardiomyocytes by 2' (3')-O- (N-Methylanthraniloyl)-Guanosine 5'-[gamma-Thio]triphosphate. *J. Pharmacol. Exp. Ther.* **321**:608.

Goettle *et al.* (2007) Molecular analysis of the interaction of Bordetella pertussis adenylyl cyclase with fluorescent nucleotides. *Molecular Pharmacology* **72** (3):526.

**Mant-GTPyS**

2'/3'-O-(N-Methyl-anthraniloyl)-guanosine-5'-(γ -thio)-triphosphate, Triethylammonium salt

Celda *et al.* (2007) Structural insights into GTPase domain of *Escherichia coli* MnmE protein. *Proteins* **66** (3):726.

Armengod *et al.* (2005) Effects of Mutagenesis in Switch I Region and Conserved Arginines of *Escherichia coli* MnmE Protein, A GTPase Involved in tRNA Modification. *J. Biol. Chem.* **280** (35):30660.

Gille *et al.* (2003) 2' (3')-O- (N-methylanthraniloyl)-substituted GTP analogs: a novel class of potent competitive adenylyl cyclase inhibitors. *J. Biol. Chem.* **278**:12672.

Remmers *et al.* (1999) Interdomain interactions regulate GDP release from heterotrimeric G proteins. *Biochemistry* **38** (42):13795.

Remmers *et al.* (1998) Detection and quantitation of heterotrimeric G proteins by fluorescence resonance energy transfer. *Anal. Biochem.* **257** (1):89.