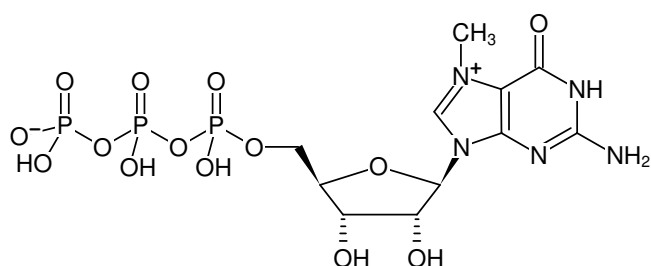


**m⁷GTP - Solid**

7-Methyl-guanosine-5'-triphosphate, Sodium salt

| Cat. No. | Amount |
|------------|--------|
| NU-1122-10 | 10 mg |
| NU-1122-25 | 25 mg |

Structural formula of m⁷GTP - Solid**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:** C₁₁H₁₈N₅O₁₄P₃ (free acid)**Molecular Weight:** 537.21 g/mol (free acid)**Exact Mass:** 537.01 g/mol (free acid)**CAS#:** 26554-26-7 (free acid), 104809-18-9 (sodium salt)**Purity:** ≥ 95 % (HPLC)**Form:** solid**Color:** white to off-white**Spectroscopic Properties:** λ_{max} 258/280 nm, ε 9.8/8.0 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)**Applications:**X-ray of complex with eIF4E^[1, 2]Thermodynamic binding analysis to eIF4E^[3]Affinity chromatography with m⁷GTP-sepharose^[4, 5]**Selected References:**[1] Ashby *et al.* (2011) Structure-based mutational analysis of eIF4E in relation to sbm1 resistance to Pea seed-borne mosaic virus in pea. *PLoS One* **6**:e15873.[2] Brown *et al.* (2009) Crystallization of eIF4E complexed with eIF4G1 peptide and glycerol reveals distinct structural differences around the cap-binding site. *Cell Cycle* **8**:1905.[3] Guimaraes *et al.* (2009) Thermodynamic analysis of mRNA cap-binding by the human initiation factor eIF4E via free energy perturbations. *J. Amer. Chem. Soc.* **131**:18139.[4] Yoffe *et al.* (2009) Evolutionary changes in the Leishmania eIF4F complex involve variations in the eIF4G interactions. *Nucleic Acid Research* **37**:3243.[5] Szczepaniak *et al.* (2008) Bisphosphonate mRNA cap analog attached to sepharose for affinity chromatography of decapping enzymes. *Nucleic Acids Symposium Series* **52**:295.Shen *et al.* (2001) Structural and thermodynamic behavior of eukaryotic initiation factor 4E in supramolecular formation with 4E-binding protein 1 and mRNA cap analogue, studied by spectroscopic methods. *Chem Pharm Bull* **49** (10):1299.Carberry *et al.* (1989) A spectroscopic study of the binding of m⁷GTP and m⁷GpppG to human protein synthesis initiation factor 4E. *Biochemistry* **28** (20):8078.Beemon *et al.* (1977) In vitro translation yields a possible Rous sarcoma virus src gene product. *Proc Natl Acad Sci U S A.* **74** (8):3302.