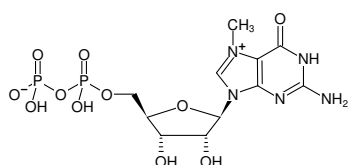




m⁷GDP - Solution

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

Cat. No.	Amount
NU-1134S	50 µl (10 mM)
NU-1134L	5 x 50 µl (10 mM)



Structural formula of m⁷GDP - Solution

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: C₁₁H₁₇N₅O₁₁P₂ (free acid)

Molecular Weight: 457.23 g/mol (free acid)

Exact Mass: 457.04 g/mol (free acid)

CAS#: 117723-13-4 (free acid), 104809-16-7 (sodium salt)

Purity: ≥ 95 % (HPLC)

Form: solution in water

Color: colorless to slightly yellow

Concentration: 10 mM - 11 mM

pH: 7.5 ± 0.5

Spectroscopic Properties: λ_{max} 258/280 nm, ε 9.8/8.0 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)

Applications:

Inhibition of cap-dependent translation^[1]

Inhibition of mitotic division^[2]

Inhibition of decapping^[3]

Selected References:

[1] Allam *et al.* (2010) Initiation factor eIF2- independent mode of c-src mRNA translation occurs via an internal ribosome entry site. *J. Biol. Chem.* **285**:5713.

[2] Oulhen *et al.* (2007) After fertilization of sea urchin eggs, eIF4G is post-translationally modified and associated with the cap-binding protein eIF4E. *J. Cell Science* **120**:425.

[3] Parrish *et al.* (2007) Vaccinia virus D10 protein has mRNA decapping activity, providing a mechanism for control of host and viral gene expression. *Proc. Natl. Acad. Sci. (USA)* **104**:2139.

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.