

PRODUCT INFORMATION

2'-Deoxy-3'-O-(N'-methylantraniloyl)guanosine-5'-O-triphosphate (sodium salt)

Item No. 38459

Formal Name: 2'-deoxy-3'-[2-(methylamino) benzoate] guanosine 5'-(tetrahydrogen triphosphate), tetrasodium salt

Synonyms: 2'-deoxy-3'-MANT-GTP, MANT-dGTP

MF: C₁₈H₁₉N₆O₁₄P₃ • 4Na

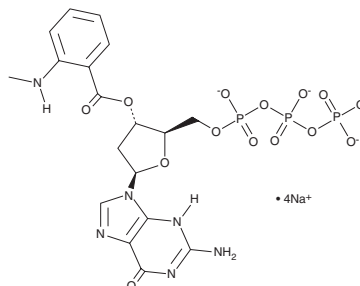
FW: 728.3

Purity: ≥95%

Supplied as: A solution in water

Storage: -80°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

2'-Deoxy-3'-O-(N'-methylantraniloyl)guanosine-5'-O-triphosphate (2'-deoxy-3'-MANT-GTP) is a fluorescent derivative of dGTP (Item No. 35771).¹⁻³ It selectively inhibits recombinant mammalian adenylyl cyclase 1 (AC1), AC2, AC5, and AC6 (K_is = 260, 1,200, 420, and 470 nM, respectively), bovine lung soluble guanylyl cyclase (sGC; K_i = 220 nM), and *B. anthracis* edema factor AC toxin (K_i = 630 nM) over rat testis soluble AC (sAC) and *B. pertussis* AC toxin (K_is = 43 and 14 μM, respectively).¹ 2'-deoxy-3'-MANT-GTP has been used to study the activity of various GTPases, including elongation factor Tu (EF-Tu) and H-Ras p21.^{2,3} A related derivative, 2'(3')-MANT-GTP (Item No. 38469), displays an emission maximum of 442 nm upon excitation at 350 nm.⁴

References

1. Gille, A., Lushington, G.H., Mou, T.-C., *et al.* Differential inhibition of adenylyl cyclase isoforms and soluble guanylyl cyclase by purine and pyrimidine nucleotides. *J. Biol. Chem.* **279**(19), 19955-19969 (2004).
2. Rodina, M.V., Fricke, R., Kuhn, L., *et al.* Codon-dependent conformational change of elongation factor Tu preceding GTP hydrolysis on the ribosome. *EMBO J.* **14**(11), 2613-2619 (1995).
3. John, J., Sohmen, R., Feuerstein, J., *et al.* Kinetics of interaction of nucleotides with nucleotide-free H-ras p21. *Biochemistry* **29**(25), 6058-6065 (1990).
4. Hiratsuka, T. New ribose-modified fluorescent analogs of adenine and guanine nucleotides available as substrates for various enzymes. *Biochim. Biophys. Acta* **742**(3), 496-508 (1983).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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