

PRODUCT INFORMATION

2'-O-Methylguanosine-5'-O-triphosphate (sodium salt)

Item No. 38568

Formal Name: 2'-O-methyl-guanosine
5'-(tetrahydrogen triphosphate),
tetrasodium salt

Synonyms: 2'-methyl GTP, 2'-O-methyl GTP

MF: $C_{11}H_{14}N_5O_{14}P_3 \cdot 4Na$

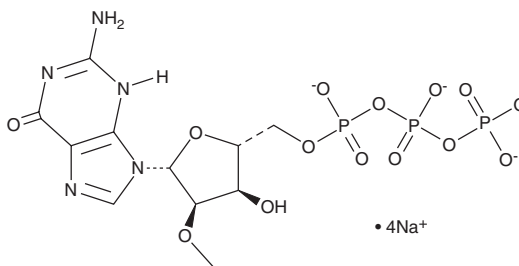
FW: 625.1

Purity: $\geq 95\%$

Supplied as: A 10 mM solution in water

Storage: $-80^\circ C$

Stability: ≥ 4 years



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

Description

2'-O-Methylguanosine-5'-O-triphosphate (2'-methyl GTP) is an inhibitor of hepatitis C virus (HCV) non-structural protein 5B (NS5B; $IC_{50} = 3.5 \mu M$) and an active metabolite of the prodrug IDX184.^{1,2} It is formed from IDX184 via a 2'-methylguanosine (Item No. 21039) intermediate.² 2'-methyl GTP (50 μM) also induces tubulin polymerization.³ Tumoral levels of 2'-methyl GTP are decreased in patients with hepatocellular carcinoma compared with adjacent normal tissue.⁴

References

1. Dutartre, H., Boretto, J., Guillemot, J.C., *et al.* A relaxed discrimination of 2'-O-methyl-GTP relative to GTP between *de novo* and Elongative RNA synthesis by the hepatitis C RNA-dependent RNA polymerase NS5B. *J. Biol. Chem.* **280**(8), 6359-6368 (2005).
2. Zhou, X.-J., Pietropaolo, K., Chen, J., *et al.* Safety and pharmacokinetics of IDX184, a liver-targeted nucleotide polymerase inhibitor of hepatitis C virus, in healthy subjects. *Antimicrob. Agents Chemother.* **55**(1), 76-81 (2011).
3. Hamel, E., del Campo, A.A., Lustbader, J., *et al.* Modulation of tubulin-nucleotide interactions by microtubule-associated proteins: Polymerization with ribose-modified analogues of guanosine 5'-triphosphate. *Biochemistry* **22**(5), 1271-1279 (1983).
4. Jiang, H.-P., Xiong, J., Liu, F.-L., *et al.* Modified nucleoside triphosphates exist in mammals. *Chem. Sci.* **9**(17), 4160-4167 (2018).

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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