

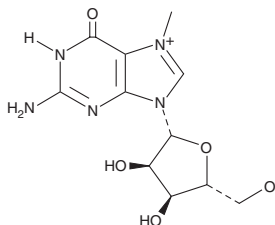
PRODUCT INFORMATION



7-Methylguanosine

Item No. 15988

CAS Registry No.: 20244-86-4
Formal Name: 7-methyl-guanosine
Synonym: m7G
MF: C₁₁H₁₅N₅O₅
FW: 297.3
Purity: ≥98%
UV/Vis.: λ_{max}: 261, 283 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

7-Methylguanosine is supplied as a crystalline solid. A stock solution may be made by dissolving the 7-methylguanosine in the solvent of choice, which should be purged with an inert gas. 7-Methylguanosine is soluble in organic solvents such as DMSO and 0.1 M HCl. The solubility of 7-Methylguanosine in these solvents is approximately 10 mg/ml.

Description

7-Methylguanosine is a methylated form of the purine nucleoside guanosine (Item No. 27702). It is an RNA modification that is present in the 5'-terminal cap of mRNA, where it promotes translation, as well as in tRNA, where it stabilizes the tRNA structure.^{1,2} 7-Methylguanosine has been used as a substrate to measure the activity of purine nucleoside phosphorylase (PNP).³ Urinary 7-methylguanosine levels are decreased in patients with prostate cancer.¹

References

1. Fernández-Peralbo, M.A., Gómez-Gómez, E., Calderón-Santiago, M., *et al.* Prostate cancer patients-negative biopsy controls discrimination by untargeted metabolomics analysis of urine by LC-QTOF: Upstream information on other omics. *Sci. Rep.* **6**, 38243 (2016).
2. Tomikawa, C. 7-Methylguanosine modifications in transfer RNA (tRNA). *Int. J. Mol. Sci.* **19(12)**, 4080 (2018).
3. Stachelska-Wierzchowska, A. and Wierzchowski, J. Non-typical nucleoside analogs as fluorescent and fluorogenic indicators of purine-nucleoside phosphorylase activity in biological samples. *Anal. Chim. Acta* **1139**, 119-128 (2020).

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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