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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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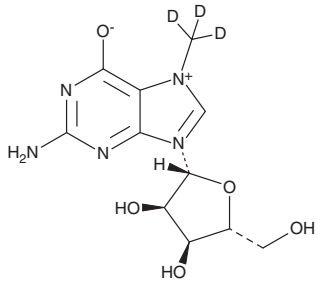
PRODUCT INFORMATION

7-Methylguanosine-d_3

Item No. 36336

Formal Name:	7-(methyl-d_3)guanosine
Synonyms:	m7G-d_3, 7-MeGua-d_3
MF:	$C_{11}H_{12}D_3N_5O_5$
FW:	300.3
Chemical Purity:	≥98% (7-Methylguanosine)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_3); ≤1% d_0
Supplied as:	A 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-d_3 is intended for use as an internal standard for the quantification of 7-methylguanosine (15988) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

7-Methylguanosine-d_3 is supplied as a solid. A stock solution may be made by dissolving the 7-methylguanosine-d_3 in the solvent of choice, which should be purged with an inert gas. 7-Methylguanosine-d_3 is soluble in the organic solvent DMSO at a concentration of 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).

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