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Produktinformation

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- Trockeneiszuschlag
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- Expressversand

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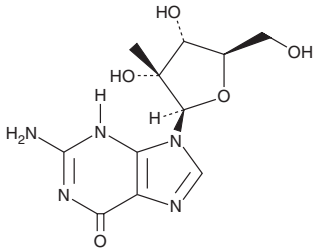
PRODUCT INFORMATION

2′-C-β-Methylguanosine

Item No. 36548

CAS Registry No.:	374750-30-8
Formal Name:	2′-C-methyl-guanosine
MF:	$C_{11}H_{15}N_5O_5$
FW:	297.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 255 nm
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

2′-C-β-Methylguanosine is supplied as a solid. A stock solution may be made by dissolving the 2′-C-β-methylguanosine in the solvent of choice, which should be purged with an inert gas. 2′-C-β-Methylguanosine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 2′-C-β-methylguanosine in these solvents is approximately 1 and 2 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 2′-C-β-methylguanosine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 2′-C-β-methylguanosine in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2'-C-β-Methylguanosine is an active nucleoside metabolite of the antiviral prodrug BMS-986094.[1] It inhibits replication in genotype 1b hepatitis C virus (HCV) replicon cells (EC_{50}s = 5.2 and 3.2 µM in ELISA and luciferase assays, respectively).[2] 2'-C-β-Methylguanosine also inhibits replication of the Zika virus clinical isolate $ZIKV_{PE243}$ in infected human brain microvascular endothelial cells (HBMECs), SH-SY5Y cells, and Vero cells (EC_{50}s = 0.88, 2.09, and 1.25 µM, respectively) but is toxic to mice infected with $ZIKV_{PE243}$ at postnatal day 2 when administered at a dose of 25 mg/kg per day.[3]

References

1. Liu, A., Lute, J., Gu, H., *et al.* Challenges and solutions in the bioanalysis of BMS-986094 and its metabolites including a highly polar, active nucleoside triphosphate in plasma and tissues using LC-MS/MS. *J. Chromatogr. B Analyt. Technol. Biomed. Life Sci.* **1000**, 29-40 (2015).
2. Sizun, G., Pierra, C., Peyronnet, J., *et al.* Design, synthesis and antiviral evaluation of 2'-C-methyl branched guanosine pronucleotides: The discovery of IDX184, a potent liver-targeted HCV polymerase inhibitor. *Future Med. Chem.* **7(13)**, 1675-1700 (2015).
3. Matos de Souza, M.R., Cunha, M.S., Okon, A., *et al. In vitro* and *in vivo* characterization of the anti-Zika virus activity of ProTides of 2'-C-β-methylguanosine. *ACS Infect. Dis.* **6(7)**, 1650-1658 (2020).

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