
Product Data Sheet

Product Name: 7-Methylguanine

Cat. No.: GC33616

Chemical Properties

Cas. No. 578-76-7

SMILES O=C1NC(N)=NC2=C1N(C)C=N2Formula $C_6H_7N_5O$

M.Wt 165.15

Solubility 1 M NaOH: 50 mg/ml

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure **Background**

7-Methylguanine is a metabolite of the natural purine base whose N9 position is available for chemical modifications.¹ This genotoxic adduct can be generated by DNA methylation and has been used as a probe of protein-DNA interactions and for DNA sequencing methods.² It is also considered to be a carcinogenic biomarker for cigarette smoking that is detectable in urine.³

1.Kozma, A., Ibañez, S., Silaghi-Dumitrescu, R., et al. 7-Methylguanine: Protonation, formation of linkage isomers with trans-(NH₃)₂Pt(II), and base pairing properties Dalton Trans. 416094-6103(2012) 2.Lee, S., Bowman, B.R., Ueno, Y., et al. Synthesis and structure of duplex DNA containing the genotoxic nucleobase lesion N7-methylguanine. J. Am. Chem. Soc. 130(35)11570-11571(2008) 3.Lee, H.L., Hsueh, Y.M., Chung, C.J., et al. Correlation between the urine profile of 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone metabolites and N7-methylguanine in urothelial carcinoma patients Cancer Epidemiol. Biomarkers Prev. 17(12)3390-3395(2008)

Caution: Product has not been fully validated for medical applications. For research use only.

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