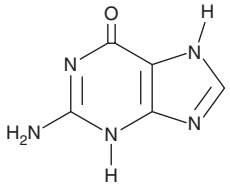
PRODUCT INFORMATION

Guanine

Item No. 34248

CAS Registry No.:	73-40-5
Formal Name:	2-amino-1,9-dihydro-6H-purin-6-one
MF:	$C_5H_5N_5O$
FW:	151.1
Purity:	≥95%
UV/Vis.:	λ_{max}: 248 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

Guanine is supplied as a solid. A stock solution may be made by dissolving the guanine in water or aqueous acid. Guanine is soluble in aqueous acid and sparingly soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

Guanine is a purine base.[1] It forms complementary base pairs with the pyrimidine cytosine in DNA and RNA. Guanine can be linked to ribose *via* a β-N_9-glycosidic bond to form the purine nucleoside guanosine (Item No. 27702), which can be phosphorylated to guanine-based purines that have numerous roles in intracellular signal transduction.[2,3]

References

1. Berg, J.M., Tymoczko, J.L., and Stryer, L. *Biochemistry*. 5th ed., *W.H. Freeman*, New York (2002).
2. Devereaux, Z.J., He, C.C., Zhu, Y., *et al.* Structures and relative glycosidic bond stabilities of protonated 2'-fluoro-substituted purine nucleosides. *J. Am. Soc. Mass Spectrom.* **30(8)**, 1521-1536 (2019).
3. Di Liberto, V., Mudò, G., Garozzo, R., *et al.* The guanine-based purinergic system: The tale of an orphan neuromodulation. *Front. Pharmacol.* **7**, 158 (2016).

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