

Product Data Sheet

Product Name: Guanine-15N5

Cat. No.: GC91546

Chemical Properties

Cas. No. 168566-53-8

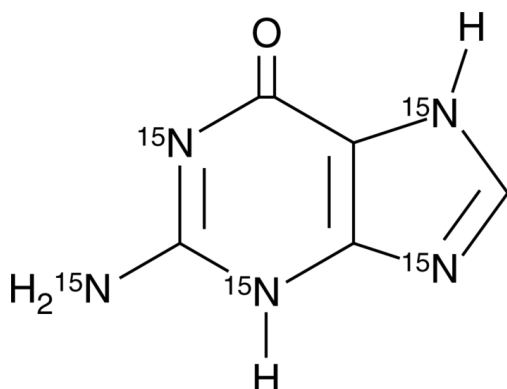
Formula $C_5H_5[^{15}N]_5O$ M.Wt 156.1

Solubility Acetonitrile: Slightly Soluble: 0.1-1 mg/ml, Water: Sparingly Soluble: 1-10 mg/ml Storage $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ 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

Guanine- $^{15}N_5$ is intended for use as an internal standard for the quantification of guanine by GC- or

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

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LC-MS. 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 -N₉-glycosidic bond to form the purine nucleoside guanosine, 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(2002).
- [2].Devereaux, Z.J., He, C.C., Zhu, Y., et al.Structures and relative glycosidic bond stabilities of protonated 2'-fluoro-substituted purine nucleosidesJ. 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 neuromodulationFront. Pharmacol.7158(2016).

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