

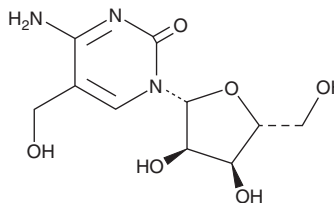
PRODUCT INFORMATION



5-Hydroxymethylcytidine

Item No. 40745

CAS Registry No.: 19235-17-7
Formal Name: 5-(hydroxymethyl)-cytidine
Synonyms: 5-hmrC, hm⁵C
MF: C₁₀H₁₅N₃O₆
FW: 273.2
Purity: ≥98%
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

5-Hydroxymethylcytidine is supplied as a solid. A stock solution may be made by dissolving the 5-hydroxymethylcytidine in the solvent of choice, which should be purged with an inert gas. 5-Hydroxymethylcytidine is soluble (≥10 mg/ml) in organic solvents such as ethanol.

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 5-hydroxymethylcytidine can be prepared by directly dissolving the solid in aqueous buffers. 5-Hydroxymethylcytidine is slightly solubility (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

5-Hydroxymethylcytidine is a derivative of the pyrimidine nucleoside cytidine (Item No. 29602).¹ It can be formed in RNA *via* the oxidation of 5-methylcytidine by ten-eleven translocation (TET) enzymes but can also be formed *via* non-TET mechanisms.^{1,2} 5-Hydroxymethylcytidine has been found as an RNA modification in Archaea, bacteria, and eukaryotes.¹

References

1. Huber, S.M., P., van Delft, P., Mendil, L., *et al.* Formation and abundance of 5-hydroxymethylcytosine in RNA. *Chembiochem* **16**(5), 752-755 (2015).
2. Fu, L., Guerrero, C.R., Zhong, N., *et al.* Tet-mediated formation of 5-hydroxymethylcytosine in RNA. *J. Am. Chem. Soc.* **136**(33), 11582-11585 (2014).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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