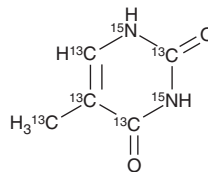


PRODUCT INFORMATION



Thymine- $^{13}\text{C}_5, ^{15}\text{N}_2$
Item No. 41172

CAS Registry No.: 2483830-13-1
Formal Name: 5-(methyl- ^{13}C)-2,4(1H,3H)-pyrimidinedione-2,4,5,6- $^{13}\text{C}_4$ -1,3- $^{15}\text{N}_2$
Synonym: 5-Methyluracil- $^{13}\text{C}_5, ^{15}\text{N}_2$
MF: [^{13}C] $_5\text{H}_6$ [^{15}N] $_2\text{O}_2$
FW: 133.1
Purity: $\geq 98\%$
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

Thymine- $^{13}\text{C}_5, ^{15}\text{N}_2$ is intended for use as an internal standard for the quantification of thymine (Item No. 38749) by GC- or LC-MS. Thymine- $^{13}\text{C}_5, ^{15}\text{N}_2$ is supplied as a solid. A stock solution may be made by dissolving the thymine- $^{13}\text{C}_5, ^{15}\text{N}_2$ in the solvent of choice, which should be purged with an inert gas. Thymine- $^{13}\text{C}_5, ^{15}\text{N}_2$ is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in acetonitrile.

Description

Thymine is a pyrimidine base.¹ It forms complementary base pairs with the purine adenine (Item No. 18148) in DNA.¹ Thymine is produced by the catabolism of thymidine (Item No. 20519) via thymidine phosphorylase.² It is replaced with uracil (Item No. 26088) in RNA.³

References

1. Ghannam, J.Y., Wang, J., and Jan, A. Biochemistry, DNA Structure. 1-5 (2021).
2. Brown, N.S. and Bicknell, R. Thymidine phosphorylase, 2-deoxy-D-ribose and angiogenesis. *Biochem. J.* **334**(Pt 1), 1-8 (1998).
3. Banoub, J.H., Newton, R.P., Esmans, E., *et al.* Recent developments in mass spectrometry for the characterization of nucleosides, nucleotides, oligonucleotides, and nucleic acids. *Chem. Rev.* **105**(5), 1869-1915 (2005).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 06/11/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM