

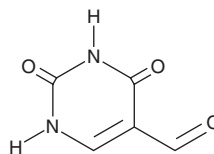
PRODUCT INFORMATION



5-Formyluracil

Item No. 36523

CAS Registry No.: 1195-08-0
Formal Name: 1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinecarboxaldehyde
Synonyms: NSC 197200, NSC 241524, Uracil-5-carboxaldehyde
MF: C₅H₄N₂O₃
FW: 140.1
Purity: ≥98%
UV/Vis.: λ_{max}: 227, 288 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

5-Formyluracil is supplied as a solid. A stock solution may be made by dissolving the 5-formyluracil in the solvent of choice, which should be purged with an inert gas. 5-Formyluracil is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of 5-formyluracil in DMSO is approximately 1 mg/ml. 5-Formyluracil is slightly soluble in DMF.

Description

5-Formyluracil is an oxidized form of thymine and a marker of DNA oxidative damage.¹ Incorporation of 5-formyluracil into DNA forms mispairings with thymine, cytosine, and guanine and induces mutations in *E. coli*.² 5-Formyluracil (1 mM) decreases the viability of V9-4 lung fibroblasts and increases their mutation frequency in a concentration-dependent manner.³

References

1. Douki, T., Delatour, T., Paganon, F., *et al.* Measurement of oxidative damage at pyrimidine bases in γ-irradiated DNA. *Chem. Res. Toxicol.* **9**(7), 1145-1151 (1996).
2. Anensen, H., Provan, F., Lian, A.T., *et al.* Mutations induced by 5-formyl-2'-deoxyuridine in *Escherichia coli* include base substitutions that can arise from mispairs of 5-formyluracil with guanine, cytosine and thymine. *Mutat. Res.* **476**(1-2), 99-107 (2001).
2. Klungland, A., Paulsen, R., Rolseth, V., *et al.* 5-Formyluracil and its nucleoside derivatives confer toxicity and mutagenicity to mammalian cells by interfering with normal RNA and DNA metabolism. *Toxicol. Lett.* **119**(1), 71-78 (2001).

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, 04/06/2023

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