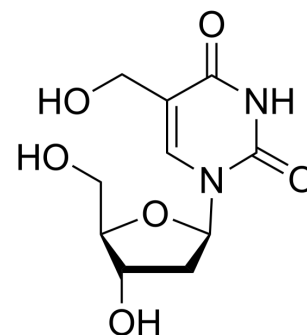


5-Hydroxymethyl-2'-deoxyuridine

Cat. No.:	HY-129983
CAS No.:	5116-24-5
Molecular Formula:	C ₁₀ H ₁₄ N ₂ O ₆
Molecular Weight:	258.23
Target:	HSV
Pathway:	Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 125 mg/mL (484.06 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	1 mM		3.8725 mL	19.3626 mL	38.7252 mL
	5 mM		0.7745 mL	3.8725 mL	7.7450 mL
	10 mM		0.3873 mL	1.9363 mL	3.8725 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

5-Hydroxymethyl-2'-deoxyuridine is a nucleoside analog. 5-Hydroxymethyl-2'-deoxyuridine inhibits the replication of multiple human leukemia cell lines with IC₅₀ values of 1.7-5.8 μM. 5-Hydroxymethyl-2'-deoxyuridine prolongs the survival of mice carrying L1210 leukemia. 5-Hydroxymethyl-2'-deoxyuridine can be used for the research of cell replication and leukemia^{[1][2][3]}.

In Vitro

5-Hydroxymethyl-2'-deoxyuridine (0-10 μM) inhibits the replication of Sarcoma 180 cells and Ehrlich ascites carcinoma cells with ED₅₀ values of 8.5 and 4 μM, respectively^[1].
5-Hydroxymethyl-2'-deoxyuridine inhibits herpes simplex virus type 1 (HSV-1) pyrimidine 2'-deoxyribonucleoside kinase with a K_i value of 3.5 μM^[1].
5-Hydroxymethyl-2'-deoxyuridine inhibits the replication of multiple human leukemia cell lines with IC₅₀ values of 1.7-5.8 μM^[2].
5-Hydroxymethyl-2'-deoxyuridine (10-100 μM) shows dose-dependent toxicity against a human acute promyelocytic leukemia cell line^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

5-Hydroxymethyl-2'-deoxyuridine (0, 5 and 50 mg/kg; i.p.; once) increases the survival of DBA/2 mice carrying L1210

leukemia^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Shiau GT, et al. Synthesis and biological activities of 5-(hydroxymethyl, azidomethyl, or aminomethyl)-2'-deoxyuridine and related 5'-substituted analogues. *J Med Chem.* 1980 Feb;23(2):127-33.

[2]. Kahilainen LI, et al. 5-Hydroxymethyl-2'-deoxyuridine. Cytotoxicity and DNA incorporation studied by using a novel [2-¹⁴C]-derivative with normal and leukemic human hematopoietic cells. *Acta Chem Scand B.* 1985;39(6):477-84.

[3]. JA Vilpo, et al. 5-Hydroxymethyl-2'-Deoxyuridine: Studies of Antileukemic Properties in Vitro and in Vivo. *Nucleosides and Nucleotides.* 1987.

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

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