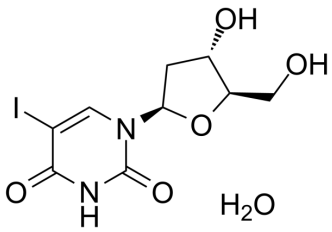
Idoxuridine hydrate

Cat. No.:	HY-B0307A
CAS No.:	17140-71-5
Molecular Formula:	$C_9H_{13}IN_2O_6$
Molecular Weight:	372.11
Target:	Phosphatase
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Idoxuridine (5-Iodo-2′-deoxyuridine, 5-IUdR, IdUrd) hydrate is an iodinated thymidine analogue that competitively inhibits phosphorylases. Idoxuridine can inhibit viral activity, particularly viral eye infections, including herpes simplex keratitis, by inhibiting DNA polymerase and affecting viral replication. Idoxuridine against feline herpesvirus has the IC_{50} value of 4.3 μM [1].

In Vitro

Idoxuridine (2-10 μM, 72 hours) hydrate has the IC_{50} value of 4.3 μM of antiviral[1].

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

Cell Proliferation Assay[1]

Cell Line:	Crandell-Reese feline kidney (CRFK) cells
Concentration:	2-10 μM
Incubation Time:	72 hours
Result:	Showed the IC_{50} value of 4.3 μM.

Cell Cytotoxicity Assay[1]

Cell Line:	Crandell-Reese feline kidney (CRFK) cells
Concentration:	5-50 μM
Incubation Time:	72 hours
Result:	Reduced by 10.8% relatively in CRFK cells.

In Vivo

Idoxuridine (intraperitoneal injection, 50-200 mg/kg, 3 times, 3 hours interval) hydrate can stimulate the production of hemolysin plaque-forming cells (HPFC) to sheep red blood cells (SRBC) in C3HeB/FeJ female and male mice and A/J male mice[2].

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

Animal Model:	C3HeB/FeJ female and male mice and A/J male mice, aged 2 to 4 months[2]

Dosage:	50-200 mg/kg
Administration:	Intraperitoneal injection, 3 times, 3 hours interval
Result:	Stimulated the production of hemolysin plaque-forming cells (HPFC) to sheep red blood cells (SRBC) in the dose range of 50-200 mg/kg.

CUSTOMER VALIDATION

- Oncogene. 2020 Apr;39(14):2905-2920.

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REFERENCES

[1].]David J Maggs, et al. In vitro efficacy of ganciclovir, cidofovir, penciclovir, foscarnet, idoxuridine, and acyclovir against feline herpesvirus type-1. Am J Vet Res. 2004 Apr;65(4):399-403.

[2]. D E Griswold, et al. Stimulation of hemolysin plaque-forming cells by idoxuridine. Cancer Res. 1975 Jan;35(1):88-92.

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