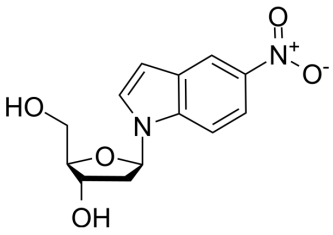
5-NIdR

Cat. No.:	HY-115567
CAS No.:	191421-10-0
Molecular Formula:	$C_{13}H_{14}N_2O_5$
Molecular Weight:	278.26
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (359.38 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.5938 mL	17.9688 mL	35.9376 mL
	5 mM	0.7188 mL	3.5938 mL	7.1875 mL
	10 mM	0.3594 mL	1.7969 mL	3.5938 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.98 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.98 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.98 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

5-NIdR (1-(β-D-2-Deoxyribofuranosyl)-5-nitroindole), an artificial nucleoside, exhibits the ability to inhibit the replication of DNA lesions generated by Temozolomide (HY-17364). 5-NIdR induces cancer cells apoptosis and arrests cell cycle at G0 phase. 5-NIdR enhances Temozolomide anti-tumor efficacy in murine glioblastoma model[1].

In Vitro

5-NIdR (12.5-100 μM; 24-72 h) inhibits the growth of human glioblastoma cell lines (U87, A172, and SW1088) in a dose-dependent manner[1].
5-NIdR (1-100 μg/mL; 72 h) induces cell apoptosis in U87 cells, and arrests cell cycle at G0 phase with 100 μg/mL overnight

	incubation[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	5-NIdR (100 mg/kg; ip; for 5 consecutive days), together with Temozolomide (40 mg/kg), results complete tumor regression in a murine xenograft model of glioblastoma. Temozolomide alone only delayed tumor growth[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Choi JS, et al. Inhibition of Translesion DNA Synthesis as a Novel Therapeutic Strategy to Treat Brain Cancer. Cancer Res. 2018 Feb 15;78(4):1083-1096.

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