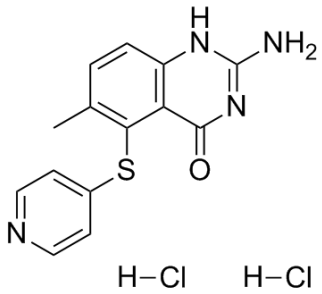
Nolatrexed dihydrochloride

Cat. No.:	HY-108474
CAS No.:	152946-68-4
Molecular Formula:	$C_{14}H_{14}Cl_2N_4OS$
Molecular Weight:	357.26
Target:	Thymidylate Synthase
Pathway:	Apoptosis
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



Solvent & Solubility

In Vitro

DMSO : 41.67 mg/mL (116.64 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7991 mL	13.9954 mL	27.9908 mL
	5 mM	0.5598 mL	2.7991 mL	5.5982 mL
	10 mM	0.2799 mL	1.3995 mL	2.7991 mL

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

In Vivo

1. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 2.08 mg/mL (5.82 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 2.08 mg/mL (5.82 mM); Clear solution
3. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: ≥ 2.08 mg/mL (5.82 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nolatrexed dihydrochloride (AG 337) is a non-competitive lipophilic inhibitor of **thymidylate synthase**, interacts at the folate cofactor binding site of the enzyme, with a K_i of 11 nM for human thymidylate synthase[1]. Nolatrexed dihydrochloride (AG 337) has anti-cancer activity, induces cell cycle arrest in S phase of cancer cells[2].

IC_{50} & Target

Ki: 11 nM (Human Thymidylate Synthase)[1]

REFERENCES

[1]. Webber S, et al. AG337, a novel lipophilic thymidylate synthase inhibitor: in vitro and in vivo preclinical studies. Cancer Chemother Pharmacol. 1996;37(6):509-17.

[2]. McGuire JJ, et al. Characterization of the effect of AG337, a novel lipophilic thymidylate synthase inhibitor, on human head and neck and human leukemia cell lines.

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