Lonidamine

Cat. No.: HY-B0486

CAS No.: 50264-69-2

Molecular Formula: $C_{15}H_{10}Cl_2N_2O_2$

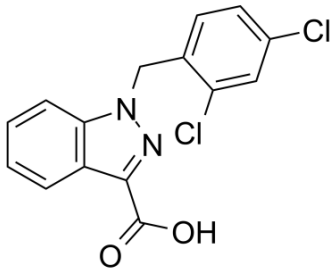
Molecular Weight: 321.16

Target: Hexokinase; Mitochondrial Metabolism; Apoptosis

Pathway: Metabolic Enzyme/Protease; 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 : 50 mg/mL (155.69 mM; Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1137 mL	15.5686 mL	31.1371 mL
5 mM	0.6227 mL	3.1137 mL	6.2274 mL
10 mM	0.3114 mL	1.5569 mL	3.1137 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: ≥ 2.08 mg/mL (6.48 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.48 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lonidamine (AF-1890), an antitumor agent, is a hexokinase, mitochondrial pyruvate carrier (K_i 2.5 μM in isolated rat liver mitochondria) and plasma membrane monocarboxylate transporters inhibitor, which also inhibits mitochondrial complex II [1][2].

IC_{50} & Target

Ki: 2.5 μM (Mitochondrial pyruvate carrier)[2]

CUSTOMER VALIDATION

- Cell Discov. 2020 Aug 18;6:56.

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REFERENCES

[1]. Guo L, et al. Inhibition of Mitochondrial Complex II by the Anticancer Agent Lonidamine. J Biol Chem. 2016 Jan 1;291(1):42-57.

[2]. Nancolas B, et al. The anti-tumour agent lonidamine is a potent inhibitor of the mitochondrial pyruvate carrier and plasma membrane monocarboxylate transporters. Biochem J. 2016 Apr 1;473(7):929-36.

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