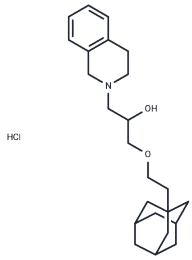
Data Sheet (Cat.No.T14126)

TargetMol

ADDA 5 hydrochloride

Chemical Properties



CAS No. : 473268-46-1

Formula: C24H36ClNO2

Molecular Weight: 406

Storage: Keep away from moisture,Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	ADDA 5 hydrochloride is a specific and non-competitive inhibitor of CcO (cytochrome c oxidase) that inhibits the proliferation of chemically sensitive and chemically resistant glioma cells and blocks cell proliferation and neurosphere formation in glioma stem cell cultures.
Targets(IC50)	Others,Cytochromes P450
In vitro	**Method**: ADDA 5 hydrochloride was used to treat cytochrome c oxidase (CcO) purified from human glioma cells and bovine heart, as well as glioblastoma stem cell (GSC) lines derived from UTMZ and Jx22, to evaluate its inhibitory effects on CcO activity and cell proliferation. **Result**: ADDA 5 hydrochloride partially and non-competitively inhibited CcO from human glioma and bovine heart, with IC_{50} values of 18.93 μM and 31.82 μM, respectively. It also inhibited CcO activity in UTMZ and Jx22 GSCs, with IC_{50} values of 21.4 μM and 15.5 μM, and exhibited antiproliferative effects on UTMZ cells (EC_{50} = 8.17 μM).[1]
In vivo	**Method**: ADDA 5 was administered intraperitoneally (i.p.) at a dose of 8 mg/kg to tumor-bearing mice to evaluate its antitumor efficacy and in vivo toxicity. **Result**: ADDA 5 (8 mg/kg, i.p.) significantly inhibited tumor growth in mice, and no detectable toxicity was observed at doses up to 80 mg/kg. [1]

Solubility Information

Solubility	DMSO: 50 mg/mL (123.15 mM),Sonication is recommended. H2O: 1 mg/mL (2.46 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.93 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and*

In vivo Formulation	*used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4631 mL	12.3153 mL	24.6305 mL
5 mM	0.4926 mL	2.4631 mL	4.9261 mL
10 mM	0.2463 mL	1.2315 mL	2.4631 mL
50 mM	0.0493 mL	0.2463 mL	0.4926 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Oliva CR, et al. Identification of Small Molecule Inhibitors of Human Cytochrome c Oxidase That Target Chemoresistant Glioma Cells. J Biol Chem. 2016 Nov 11;291(46):24188-24199. Epub 2016 Sep 27.