Salsolidine

Cat. No.: HY-22385

CAS No.: 5784-74-7

Molecular Formula: $C_{12}H_{17}NO_2$

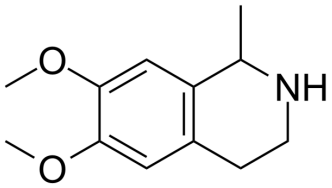
Molecular Weight: 207.27

Target: Monoamine Oxidase

Pathway: Neuronal Signaling

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 (241.23 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.8246 mL	24.1231 mL	48.2462 mL
	5 mM	0.9649 mL	4.8246 mL	9.6493 mL
	10 mM	0.4825 mL	2.4123 mL	4.8246 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 (12.06 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (12.06 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Salsolidine is a tetrahydroisoquinoline alkaloid, acts as a stereoselective competitive MAO A inhibitor.

IC_{50} & Target

MAO A[1]

In Vitro

Salsolidine is a tetrahydroisoquinoline alkaloid, acts as a stereoselective competitive MAO A inhibitor. The R-salsolidine is more active against MAO A than S-salsolidine (K_i=6 μM and 186 μM, respectively)[1].
Salsolidine weakly inhibits the binding of δ-receptor, with a K_i of >100 μM[2].
Salsolidine has the potential of inhibiting Acetylcholinestearse and butyrylcholinesterase[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- bioRxiv. 2023 Jun 3.

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REFERENCES

[1]. Bembenek ME, et al. Inhibition of monoamine oxidases A and B by simple isoquinoline alkaloids: racemic and optically active 1,2,3,4-tetrahydro-, 3,4-dihydro-, and fully aromatic isoquinolines. J Med Chem. 1990 Jan;33(1):147-52.

[2]. Airaksinen MM, et al. Binding of beta-carbolines and tetrahydroisoquinolines by opiate receptors of the delta-type. Acta Pharmacol Toxicol (Copenh). 1984 Nov;55(5):380-5.

[3]. Tundis R, et al. A potential role of alkaloid extracts from Salsola species (Chenopodiaceae) in the treatment of Alzheimer's disease. J Enzyme Inhib Med Chem. 2009 Jun;24(3):818-24.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA