Isocarboxazid

Cat. No.: HY-13929

CAS No.: 59-63-2

Molecular Formula: $C_{12}H_{13}N_3O_2$

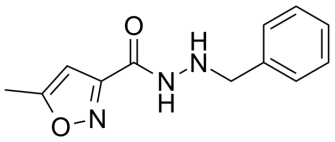
Molecular Weight: 231.25

Target: Monoamine Oxidase

Pathway: Neuronal Signaling

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (432.43 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	4.3243 mL	21.6216 mL	43.2432 mL
	5 mM	0.8649 mL	4.3243 mL	8.6486 mL
	10 mM	0.4324 mL	2.1622 mL	4.3243 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 (10.81 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (10.81 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.81 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Isocarboxazid is a non-selective and irreversible inhibitor of monoamine oxidase, with an IC_{50} of 4.8 μM for rat brain monoamine oxidase in vitro[1].

IC_{50} & Target

IC50: 4.8 μM (rat brain monoamine oxidase)[1].

In Vivo

Isocarboxazid (1, 3 mg/kg, i.p., 60 min) pretreatment in mice shows the significant increased number of head twitches at 15 and 30 min after 5-HTP[2].
Isocarboxazid (1, 3 mg/kg, i.p., 60 min) treatment in mice together with 5-HTP administration causes 43% 5-HT

concentration increased and 22% of 5-HIAA decreased compared to brain concentrations in mice given 5-HTP alone[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Twelve male mice of dd strain (20-25 g)[2]
Dosage:	0, 0.3,1, 3 mg/kg
Administration:	Intraperitoneally 60 min before intravenous injection of 5-HTP
Result:	The number of head twitches at 15 and 30 min after 5-HTP was increased. 43% 5-HT concentration increased and 22% of 5-HIAA decreased.

CUSTOMER VALIDATION

- Research Square Preprint. 2022 Feb.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. MAXWELL DR, et al. Relative activity of some inhibitors of mono-amine oxidase in potentiating the action of tryptamine in vitro and in vivo. Br J Pharmacol Chemother. 1961 Dec;17:310-20.

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