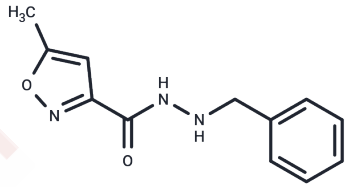
Data Sheet (Cat.No.T4559)

TargetMol

Isocarboxazid

Chemical Properties



CAS No. : 59-63-2

Formula: C12H13N3O2

Molecular Weight: 231.25

Storage: 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	Isocarboxazid has the formula 1-benzyl-2-(5-methyl-3-isoxazolylcarbonyl)hydrazine-isocarboxazid. It is a monoamine oxidase inhibitor.[2] It is used in the treatment of major depression, dysthymic disorder, atypical disorder, panic disorder and the phobic disorders.
Targets(IC50)	Monoamine Oxidase
In vitro	In vivo studies demonstrated isocarboxazid-driven inhibition of MAO in the brain, heart, and liver. The reduced MAO activity, caused by isocarboxazid, results in an increased concentration of serotonin, epinephrine, norepinephrine, and dopamine in storage sites throughout the central nervous system (CNS) and sympathetic nervous system. The increase of one or more monoamines is the basis for the antidepressant activity of MAO inhibitors like isocarboxazid.[1]
In vivo	In vitro studies demonstrated isocarboxazid-driven inhibition of MAO in the brain, heart, and liver. The reduced MAO activity, caused by isocarboxazid, results in an increased concentration of serotonin, epinephrine, norepinephrine, and dopamine in storage sites throughout the central nervous system (CNS) and sympathetic nervous system. The increase of one or more monoamines is the basis for the antidepressant activity of MAO inhibitors like isocarboxazid.[1]

Solubility Information

Solubility	DMSO: 50 mg/mL (216.22 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 (8.65 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 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	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
50 mM	0.0865 mL	0.4324 mL	0.8649 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

Chen X, Ji ZL, Chen YZ: TTD: Therapeutic Target Database. Nucleic Acids Res. 2002 Jan 1;30(1):412-5.
Thase ME, Trivedi MH, Rush AJ: MAOIs in the contemporary treatment of depression. Neuropsychopharmacology. 1995 May;12(3):185-219.
Kettler R, Da Prada M, Burkard WP: Comparison of monoamine oxidase-A inhibition by moclobemide in vitro and ex vivo in rats. Acta Psychiatr Scand Suppl. 1990;360:101-2.