

## Clorgyline

## Chemical Properties

CAS No. : 17780-72-2

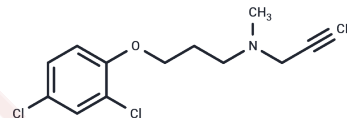
Formula: C<sub>13</sub>H<sub>15</sub>Cl<sub>2</sub>NO

Molecular Weight: 272.17

Keep away from moisture

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Clorgyline (M&B 9302), an irreversible and selective MAO-A inhibitor with the advantages of oral activity and blood-brain barrier permeability, has an antidepressant effect by structurally altering the enzyme through the formation of intermediate radical cations, and reduces 1% fbs-stimulated VSMC (vascular smooth muscle cell) growth.
Targets(IC50)	MAO, Monoamine Oxidase
In vitro	Clorgyline is well known as a selective monoamine oxidase A (MAO-A) inhibitor[1].
In vivo	In chick models, intracerebroventricular injection of Clorgyline (81 nmol) significantly suppressed orexin-A (0.2 nmol)-induced arousal behaviors and reduced brain levels of monoamine metabolites (DOPAC and 5-HIAA). This indicates that Clorgyline blocks MAO-A-mediated monoaminergic activity, thereby inhibiting orexin-A's arousal effects. While Clorgyline alone did not alter food intake, Clorgyline increased 5-HT and decreased 5-HIAA levels, confirming inhibition of serotonin metabolism[1].

## Solubility Information

Solubility	DMSO: 80 mg/mL (293.93 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (12.12 mM), Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.6742 mL	18.3709 mL	36.7417 mL
5 mM	0.7348 mL	3.6742 mL	7.3483 mL
10 mM	0.3674 mL	1.8371 mL	3.6742 mL
50 mM	0.0735 mL	0.3674 mL	0.7348 mL

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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

Katayama S, Shigemi K, Cline MA, Furuse M. Clorgyline inhibits orexin-A-induced arousal in layer-type chicks. *J Vet Med Sci.* 2011 Apr;73(4):471-4.

Shi K, Jing B, Feng Y, et al. Anemarrhena asphodeloides Bunge total saponins lower lipid via modulating MAOA activity to enhance defense mechanisms in mice and *C. elegans*. *Journal of Ethnopharmacology.* 2024: 118814.

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