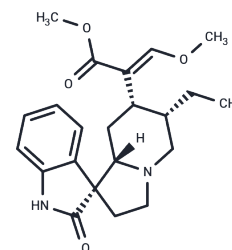


## Corynoxine B

## Chemical Properties

CAS No. :	17391-18-3
Formula:	C <sub>22</sub> H <sub>28</sub> N <sub>2</sub> O <sub>4</sub>
Molecular Weight:	384.47
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



## Biological Description

Description	Corynoxine B (Cory B), a natural alkaloid isolated from <i>Uncaria rhynchophylla</i> (Miq. ), is an autophagy inducer that enhances the activity of Beclin 1/VPS34 complex and increases autophagy by facilitating the interaction between Beclin 1 and HMGB1/2, which may ameliorate Alzheimer's disease. NVP-BAG956 (NVP-BAG956)
Targets(IC50)	Autophagy
In vitro	25-100 $\mu$ M Corynoxine B, treated for 2 h, ameliorated autophagy dysregulation and neurotoxicity in Mn-induced SH-SY5Y human neuroblastoma cells. [1] In PC12 cells, Corynoxine B upregulated BECN1 protein expression and restored autophagy inhibition induced by SNCA/ $\alpha$ -synuclein ( $\alpha$ -syn) overexpression. [2]
In vivo	In a mouse model of Parkinson's disease, intraperitoneal injection of 5-20 mg/kg Corynoxine B promotes autophagic clearance of $\alpha$ -synuclein ( $\alpha$ -syn) by targeting HMGB1/2. [3]

## Solubility Information

Solubility	DMSO: 80 mg/mL (208.08 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: 3.3 mg/mL (8.58 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	2.601 mL	13.0049 mL	26.0098 mL
5 mM	0.5202 mL	2.601 mL	5.202 mL
10 mM	0.2601 mL	1.3005 mL	2.601 mL
50 mM	0.052 mL	0.2601 mL	0.5202 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

Yan D, et al. Corynoxine B ameliorates HMGB1-dependent autophagy dysfunction during manganese exposure in SH-SY5Y human neuroblastoma cells. *Food Chem Toxicol.* 2019 Feb;124:336-348.

Song JX, et al. HMGB1 is involved in autophagy inhibition caused by SNCA/ $\alpha$ -synuclein overexpression: a process modulated by the natural autophagy inducer corynoxine B. *Autophagy.* 2014 Jan;10(1):144-54.

Zhu Q, et al. Corynoxine B targets at HMGB1/2 to enhance autophagy for  $\alpha$ -synuclein clearance in fly and rodent models of Parkinson's disease. *Acta Pharm Sin B.* 2023 Jun;13(6):2701-2714.

Sakakibara I, et al. Effect of oxindole alkaloids from the hooks of *Uncaria macrophylla* on thiopental-induced hypnosis. *Phytomedicine.* 1998 Apr;5(2):83-6.

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