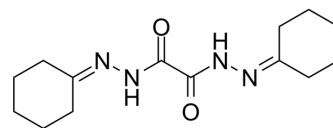


## Cuprizone

Cat. No.:	HY-W115718		
CAS No.:	370-81-0		
Molecular Formula:	C <sub>14</sub> H <sub>22</sub> N <sub>4</sub> O <sub>2</sub>		
Molecular Weight:	278.35		
Target:	Dopamine β-hydroxylase		
Pathway:	Metabolic Enzyme/Protease		
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 : 6.67 mg/mL (23.96 mM; ultrasonic and warming and heat to 60°C)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div>	Mass	1 mg	5 mg	10 mg
		1 mM		3.5926 mL	17.9630 mL	35.9260 mL
		5 mM		0.7185 mL	3.5926 mL	7.1852 mL
		10 mM		0.3593 mL	1.7963 mL	3.5926 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.67 mg/mL (2.41 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 0.67 mg/mL (2.41 mM); Clear solution					

### BIOLOGICAL ACTIVITY

Description	Cuprizone is a copper chelating agent that forms a deep blue copper ketone complex with copper (II). The copper ketone reaction can be used in colorimetric tests for the presence of trace copper. Cuprizone can be used to induce some schizophrenia-like behavior in mice. Cuprizone acts on copper enzymes, including SOD1, cytochrome oxidase, and DβH, thereby causing oxidative stress and increasing DA levels in certain brain regions such as the medial prefrontal cortex (PFC) [1].
In Vivo	Cuprizone (0.5 mg/100 mg of diet and water given ad lib; p.o.) produces severe status spongiosus in the CNS, most prominently in the brain stem and cerebellar white matter of mice <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- Acta Pharmacol Sin. 2022 Oct 13.

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## REFERENCES

- [1]. Suzuki K, et al. Status spongiosus of CNS and hepatic changes induced by cuprizone (biscyclohexanone oxalyldihydrazone). Am J Pathol. 1969 Feb;54(2):307-25.
- [2]. Sanadgol N, et al. Alpha-lipoic acid mitigates toxic-induced demyelination in the corpus callosum by lessening of oxidative stress and stimulation of polydendrocytes proliferation. Metab Brain Dis. 2018 Feb;33(1):27-37.
- [3]. M Jake Pushie, et al. Synthesis and structural characterization of copper-cuprizone complexes. Dalton Trans. 2022 Jun 29.
- [4]. Haiyun Xu, et al. Behavioral and neurobiological changes in C57BL/6 mouse exposed to cuprizone: effects of antipsychotics. Front Behav Neurosci. 2010 Mar 18;4:8.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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