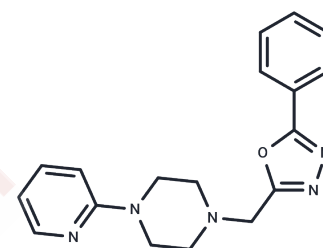


## AChE-IN-63

## Chemical Properties

CAS No. : 876685-78-8  
 Formula: C<sub>18</sub>H<sub>19</sub>N<sub>5</sub>O  
 Molecular Weight: 321.38  
 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	AChE-IN-63 (Compound 5AD) serves as a selective inhibitor of hAChE, exhibiting an IC <sub>50</sub> value of 0.103 μM. Moreover, it inhibits hBChE and hBACE-1 with IC <sub>50</sub> values of 10 μM and 1.342 μM, respectively. AChE-IN-63 is effective in inhibiting Aβ aggregation and preventing the formation and deposition of Aβ <sub>1-42</sub> . It can effectively penetrate the blood-brain barrier and is orally bioavailable. This compound is primarily utilized in research related to Alzheimer's disease [1].
Targets(IC <sub>50</sub> )	Beta Amyloid, Beta-Secretase, Cholinesterase (ChE)
In vitro	AChE-IN-63 (5-20 μM; 48 h) inhibits the aggregation of Aβ <sub>1-42</sub> in a concentration-dependent manner [1].
In vivo	Administered orally in a single dose at 100 mg/kg, AChE-IN-63 did not exhibit toxicity or any abnormal reactions in Swiss albino mice [1]. In the scopolamine-induced Y-maze model, AChE-IN-63 at doses of 5-20 mg/kg (p.o.; 单剂量) significantly enhanced learning and memory abilities in mice with cognitive impairment, demonstrating notable antioxidative properties [1]. In the same animal model, the compound improved spontaneous alternation behavior while reducing AChE and MDA levels and increasing CAT levels at dosages of 5, 10, and 20 mg/kg [1].

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	3.1116 mL	15.5579 mL	31.1158 mL
5 mM	0.6223 mL	3.1116 mL	6.2232 mL
10 mM	0.3112 mL	1.5558 mL	3.1116 mL
50 mM	0.0622 mL	0.3112 mL	0.6223 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.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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