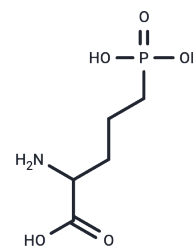


DL-AP5

## Chemical Properties

CAS No. : 76326-31-3  
 Formula: C<sub>5</sub>H<sub>12</sub>NO<sub>5</sub>P  
 Molecular Weight: 197.13  
 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	DL-AP5 is the racemic form of a selective N-methyl-D-aspartate (NMDA) receptor antagonist with anticonvulsant effects.
Targets(IC50)	NMDAR,iGluR
In vivo	DL-AP5, a competitive NMDAR antagonist, on tramadol state-dependent memory. A single-trial step-down passive avoidance task was used for the assessment of memory retrieval in adult male NMRI mice. Post-training i.p. administration of an atypical $\mu$ -opioid receptor agonist, tramadol (2.5 and 5 mg/kg), dose-dependently induced impairment of memory retention. Pre-test injection of tramadol (2.5 and 5 mg/kg) induced state-dependent retrieval of the memory acquired under post-training administration of tramadol (5 mg/kg) influence. Pre-test intra-CA1 injection of NMDA (10 <sup>-5</sup> and 10 <sup>-4</sup> $\mu$ g/mouse) 5 min before the administration of tramadol (5 mg/kg, i.p.) dose-dependently inhibited tramadol state-dependent memory. Pre-test intra-CA1 injection of DL-AP5 (0.25 and 0.5 $\mu$ g/mouse) reversed the memory impairment induced by post-training administration of tramadol (5 mg/kg). Pre-test administration of DL-AP5 (0.25 and 0.5 $\mu$ g/mouse) with an ineffective dose of tramadol (1.25 mg/kg) restored the retrieval and induced tramadol state-dependent memory. It can be concluded that dorsal hippocampal NMDAR mechanisms play an important role in the modulation of tramadol state-dependent memory.

## Solubility Information

Solubility	H <sub>2</sub> O: 15.56 mg/mL (78.93 mM),Sonication is recommended. DMSO: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	5.0728 mL	25.364 mL	50.7279 mL
5 mM	1.0146 mL	5.0728 mL	10.1456 mL
10 mM	0.5073 mL	2.5364 mL	5.0728 mL
50 mM	0.1015 mL	0.5073 mL	1.0146 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

Jafari-Sabet M , Mofidi H , Attarian-Khosroshahi M S . NMDA receptors in the dorsal hippocampal area are involved in tramadol state-dependent memory of passive avoidance learning in mice[J]. Canadian Journal of Physiology and Pharmacology, 2017:cjpp-2017-0228.

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