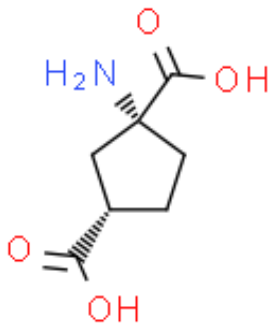
Product Data Sheet

Cas No.:	67684-64-4	Cat. No:	PC14400
Product Name:	(±)-trans-ACPD		
Product synonym:	-		
Chemical name:	(±)-trans-ACPD		
MF:	C7H11NO4	FW:	173.16654
Purity:	≥98%	Batch No.:	-
Storage:			
Structural formula:			
λmax:	-	Formulation:	-
Solubility :			
SMILES :	O=C([C@]1(N)C[C@@H](C(O)=O)CC1)O		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

代谢型谷氨酸受体激动剂，trans-ACPD 是一种代谢型受体激动剂，促进钙离子活动及产生内向电流。

生物活性	trans-ACPD, a metabotropic receptor agonist, produces **calcium** mobilization and an inward current in cultured cerebellar Purkinje neurons.
IC50 & Target[1][2]	mGluR

体外研究(In Vitro)	Excitatory amino acid (EAA) analogues activate receptors that are coupled to the increased hydrolysis of phosphoinositides (PIs). In these studies, hippocampal slices are prepared from neonatal rats (6-11 days old) to characterize the effects of EAA analogues on these receptors. The concentrations of trans-ACPD required to evoke half-maximal stimulation (EC_{50} value) is 51 μM. DL-2-Amino-3-phosphonopropionate (DL-AP3) is also equipotent as an inhibitor of PI hydrolysis stimulated by ibotenate, quisqualate, and trans-ACPD (IC_{50} values are 480-850 μM). **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.**
体内研究(In Vivo)	Intrathecal injection of NMDA, kainate, and trans-ACPD, TNF-α, or IL-1β causes significant ($p<0.001$) biting behaviour in mice compared to animals injected intrathecally with saline. In all groups, systemic pre-treatment with GM (100 mg/kg, i.p.) significantly ($p<0.001$) reduces the biting behaviour compared to mice treated with saline (10 mL/kg, i.p.). The greatest effect of GM is observed on the pro-inflammatory cytokines and NMDA, with the following inhibition percentages: TNF-α (92±7%), IL-1β (91±5%), NMDA (69±1%), and trans-ACPD (71±12%). By contrast, at the same dose, GM has no significant effect on the kainate-mediated biting response. **Medlife has not independently confirmed the accuracy of these methods. They are for reference only.**
包装储存	Powder **-20°C** 3 years **4°C** 2 years In solvent **-80°C** 6 months **-20°C** 1 month

溶解度数据

体外研究:

DMSO : 50 mg/mL (288.73 mM; Need ultrasonic)

H_2O : 3.57 mg/mL (20.62 mM; Need ultrasonic)

配制储备溶液	溶剂体积 质量 浓度	1 mg	5 mg	10 mg
	1 mM	5.7747 mL	28.8734 mL	57.7467 mL
	5 mM	1.1549 mL	5.7747 mL	11.5493 mL
	10 mM	0.5775 mL	2.8873 mL	5.7747 mL

* 产品不同，其溶解度不同。建议根据产品选择合适的溶剂配制储备溶液；配成溶液后，**建议分装保存，避免反复冻融造成的产品失效**。

储备液的保存方式和期限： -80°C, 6 months; -20°C, 1 month。-80°C 储存时，建议在 6 个月内使用，-20°C 储存时，建议在 1 个月内使用。

体内研究:

建议根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都建议先按照 **体外研究** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，**澄清的储备液可以根据储存条件，适当保存**；体内实验的工作液，**建议您现用现配，当天使用**； 以下溶剂前显示的百分比是指**该溶剂在您配制终溶液中的体积占比**；如在配制过程中出现沉淀、析出现象，可以通过**加热和/或超声的方式助溶**

1. 建议依照次序添加每种溶剂： PBS

   Solubility: 5 mg/mL (28.87 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

2. 建议依照次序添加每种溶剂： 10% DMSO 40% PEG300 5% Tween-80 45% saline

   Solubility: ≥ 2.5 mg/mL (14.44 mM); Clear solution

   此方案可获得 ≥ 2.5 mg/mL (14.44 mM，饱和度未知) 的澄清溶液。

   以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入50 μL Tween-80，混合均匀；然后继续加入 450 μL生理盐水定容至 1 mL。

   将 0.9 g 氯化钠，完全溶解于 100 mL ddH?O 中，得到澄清透明的生理盐水溶液

3. 建议依照次序添加每种溶剂： 10% DMSO 90% corn oil

   Solubility: ≥ 2.5 mg/mL (14.44 mM); Clear solution

   此方案可获得 ≥ 2.5 mg/mL (14.44 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。

   以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL玉米油中，混合均匀。

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