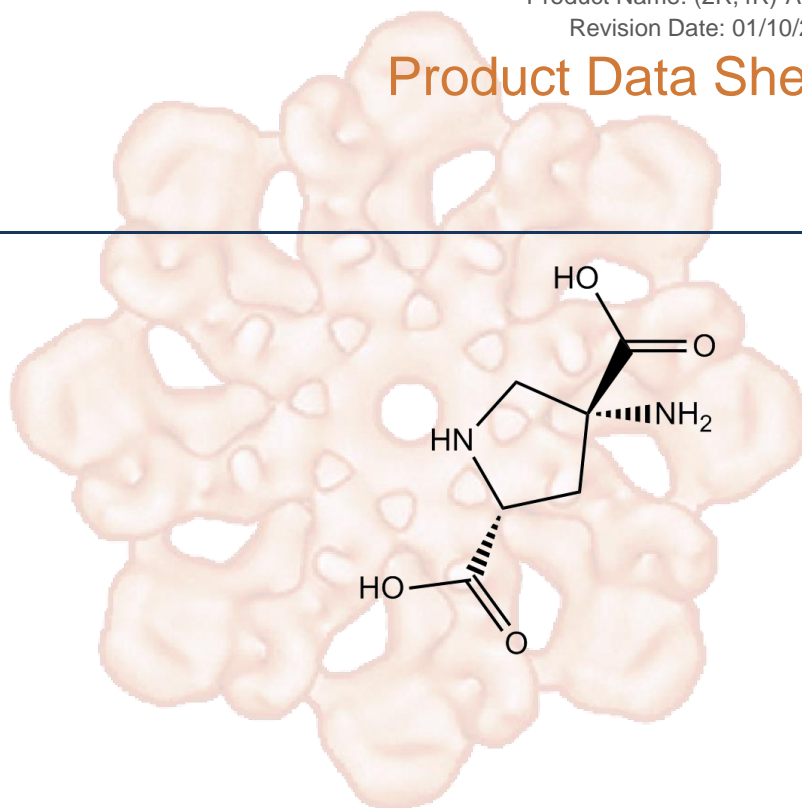


Product Data Sheet

(2R,4R)-APDC

Cat. No.:	B6634
CAS No.:	169209-63-6
Formula:	C ₆ H ₁₀ N ₂ O ₄
M.Wt:	174.16
Synonyms:	
Target:	Neuroscience
Pathway:	GluR
Storage:	Desiccate at RT



Solvent & Solubility

Soluble to 100 mM in H₂O

In Vitro

Preparing Stock Solutions	Solvent Concentration	Mass		
		1mg	5mg	10mg
	1 mM	5.7418 mL	28.7092 mL	57.4185 mL
	5 mM	1.1484 mL	5.7418 mL	11.4837 mL
	10 mM	0.5742 mL	2.8709 mL	5.7418 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

group II metabotropic glutamate receptor agonist

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line:	Human mGluR2 expressing CHO cell
Preparation method:	The solubility of this compound is up to 100 mM in sterile water. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	(2R,4R)-APDC were added and incubated for 20 min at 37°C.
Applications:	2R,4R-APDC inhibited forskolin-stimulated CAMP formation in human mGluR2

expressing cells with greater potency than IS,3R-ACPD, but unlike IS,3R-ACPD, (2R,4R)-APDC showed no obvious activation of phosphoinositide hydrolysis in human mGluR.lcc expressing cells..

Animal experiment

Animal models:	Female Wistar rats were anesthetized with pentobarbitone Na, and a lumbar laminectomy was performed to allow insertion of a seven-barrel glass microelectrode into the gray matter of the spinal cord. Action potential firing rate of single neurons was recorded continuously in response to timed intermittent ejection of AMPA (10 mM in 200 mM NaCl, pH 7.4) from one barrel of the electrode.
Dosage form:	When consistent submaximal responses were established, (2R,4R)-APDC at 25 mM in 175 mM NaCl, pH 7.4 were ejected on different cells.
Applications:	(2R,4R)-APDC caused a robust enhancement of AMPA responses on AMPA evoked responses in intact rat spinal cord neurons.
Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

In Vivo

Product Citations

See more customer validations on www.apexbt.com.

References

- [1] Monn JA, et al. Synthesis of the four isomers of 4-aminopyrrolidine-2,4-dicarboxylate: identification of a potent, highly selective, and systemically-active agonist for metabotropic glutamate receptors negatively coupled to adenylate cyclase. J Med Chem. 1996 Jul 19;39(15):2990-3000.
- [2] Schoepp DD, et al. Selective inhibition of forskolin-stimulated cyclic AMP formation in rat hippocampus by a novel mGluR agonist, 2R,4R-4-aminopyrrolidine-2,4- dicarboxylate. Neuropharmacology. 1995 Aug;34(8):843-50.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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