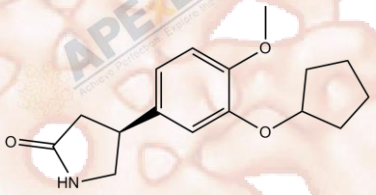
Product Data Sheet

Rolipram



Cat. No.:	A4328
CAS No.:	61413-54-5
Formula:	C16H21NO3
M.Wt:	275.34
Synonyms:	
Target:	Metabolism
Pathway:	PDE
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

insoluble in H2O; ⩾13 mg/mL in DMSO; ⩾24.65 mg/mL in EtOH with ultrasonic

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	3.6319 mL	18.1594 mL	36.3187 mL
5 mM	0.7264 mL	3.6319 mL	7.2637 mL
10 mM	0.3632 mL	1.8159 mL	3.6319 mL

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

Biological Activity

Shortsummary	PDE4-inhibitor and an anti-inflammatory agent
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	U937 cells
Preparation method:	The solubility of this compound in DMSO is > 13 mg/mL. 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:	0 ~ 10000 nM; 20 mins

	Applications:	In U937 cells, Rolipram increased protein kinase A (PKA)-mediated cAMP-response-element-binding protein (CREB) phosphorylation in a dose-dependent manner. In contrast, Rolipram dose-dependently inhibited p38 MAP kinase phosphorylation induced by interferon-γ, with an IC50 value of 294 ± 99 nM.
In Vivo	**Animal experiment**	
	Animal models:	SD rats
	Dosage form:	300 μg/100 g; i.v.
	Applications:	In SD rats, Rolipram significantly reduced mean arterial pressure. In SD rats treated with lipopolysaccharide and Rolipram, cardiac index significantly increased only at 3 hrs. In addition, Rolipram significantly decreased sinusoidal volumetric flow and increased sinusoidal diameter, which indicated protective effects of Rolipram on sinusoidal microhemodynamics in endotoxemia.
	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.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. MacKenzie SJ, Houslay MD. Action of rolipram on specific PDE4 cAMP phosphodiesterase isoforms and on the phosphorylation of cAMP-response-element-binding protein (CREB) and p38 mitogen-activated protein (MAP) kinase in U937 monocytic cells. Biochem J. 2000 Apr 15;347(Pt 2):571-8.

[2]. Wollborn J, Wunder C, Stix J, Neuhaus W, Bruno RR, Baar W, Flemming S, Roewer N, Schlegel N, Schick MA. Phosphodiesterase-4 inhibition with rolipram attenuates hepatocellular injury in hyperinflammation in vivo and in vitro without influencing inflammation and HO-1 expression. J Pharmacol Pharmacother. 2015 Jan-Mar;6(1):13-23.

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 APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm 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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