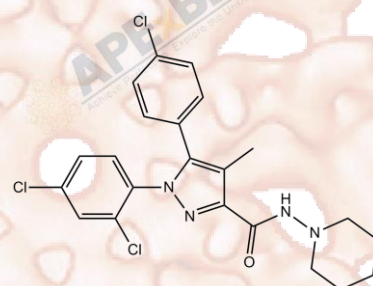


Product Data Sheet

Rimonabant

Cat. No.:	B1429
CAS No.:	168273-06-1
Formula:	C ₂₂ H ₂₁ Cl ₃ N ₄ O
M.Wt:	463.79
Synonyms:	
Target:	GPCR/G protein
Pathway:	Cannabinoid Receptor
Storage:	Store at -20°C



Solvent & Solubility

≥23.19 mg/mL in DMSO; insoluble in H₂O; ≥57.1 mg/mL in EtOH

In Vitro

	Solvent	Mass Concentration	Mass		
			1mg	5mg	10mg
Preparing Stock Solutions		1 mM	2.1561 mL	10.7807 mL	21.5615 mL
		5 mM	0.4312 mL	2.1561 mL	4.3123 mL
		10 mM	0.2156 mL	1.0781 mL	2.1561 mL

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

Biological Activity

Shortsummary

CB1 receptor antagonist

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line:	Peripheral blood mononuclear cells (PBMC); keratinocyte cell line (C5N cells)
Preparation method:	The solubility of this compound in DMSO is >10 mM. 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:	Patients received rimonabant 20 mg daily, for 4 weeks; or 0.3–10 μM for 24 h

		and 48 h
	Applications:	Treatment with rimonabant in peripheral blood mononuclear cells (PBMC) did not induce significant changes of monocytes, B cells, total T cells or T cell subsets. Moreover, there was a small but significant increase in CD16+, CD3–, and/or CD56+ cells after rimonabant therapy. Additionally, Rimonabant reduced keratinocyte cell line (C5N cells) viability by induction of apoptosis.
In Vivo	Animal experiment	
	Animal models:	Male CD-1 mice model
	Dosage form:	0.1,0.3, and 1.0µmol-cm-2 for 6 h or 24 h
	Applications:	Rimonabant significantly reduced oedema and leukocyte infiltrate, and showed topical anti-inflammatory activity in mice.
	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

1. Michael A Taffe, K. M. et al. "Effects of Δ9-tetrahydrocannabinol (THC) vapor inhalation in Sprague-Dawley and Wistar rats." bioRxiv. 2019 February 05
2. He X, Yang L, et al. "Targeting the Endocannabinoid/CB1 Receptor System For Treating Major Depression Through Antidepressant Activities of Curcumin and Dexanabinol-Loaded Solid Lipid Nanoparticles." Cell Physiol Biochem. 2017 Aug 17;42(6):2281-2294.PMID:28848078
3. Jacques Nguyen, K. Creehan, et al. "Repeated vapor inhalation of Δ9-tetrahydrocannabinol induces tolerance to hypothermia in female rats." biorxiv.2017.August 4

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References

1. Chu, C. M., Hung, M. S., Hsieh, M. T., Kuo, C. W., Suja, T. D., Song, J. S., Chiu, H. H., Chao, Y. S. and Shia, K. S. (2008) Bioisosteric replacement of the pyrazole 3-carboxamide moiety of rimonabant. A novel series of oxadiazoles as CB1 cannabinoid receptor antagonists. Org Biomol Chem. 6, 3399-3407
2. Malfitano, A. M., Sosa, S., Laezza, C., De Bortoli, M., Tubaro, A. and Bifulco, M. (2011) Rimonabant reduces keratinocyte viability by induction of apoptosis and exerts topical anti-inflammatory activity in mice. Br J Pharmacol. 162, 84-93
3. Almestrand, S., Wang, X., Jeppsson-Ahlberg, A., Nordgren, M., Flygare, J., Christensson, B., Rossner, S. and Sander, B. (2015) Influence of rimonabant treatment on peripheral blood mononuclear cells; flow cytometry analysis and gene expression profiling. PeerJ. 3, e1056

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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