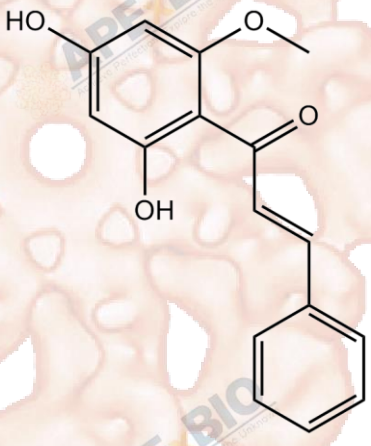
Cardamonin



Cat. No.: B7085
CAS No.: 19309-14-9; 18956-16-6
Formula: C16H14O4
M.Wt: 270.28
Synonyms:
Target: Immunology/Inflammation
Pathway: NF-κB
Storage: Store at -20°C

Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ⩾43.5 mg/mL in DMSO

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	3.6999 mL	18.4993 mL	36.9987 mL
5 mM	0.7400 mL	3.6999 mL	7.3997 mL
10 mM	0.3700 mL	1.8499 mL	3.6999 mL

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

Biological Activity

Shortsummary	NF-κB inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Activated RAW 264.7 cells and whole blood, vascular smooth muscle cell
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:	17–20 h
	Applications:	Cardamonin inhibited NO and PGE2 production from lipopolysaccharide- and IFNγ-induced RAW cells and whole blood with IC50 values of 11.4 μM and 26.8 μM, respectively. In whole blood, cardamonin inhibited the generation of TxB2. Cardamonin dose-dependently inhibited the generation of intracellular reactive oxygen species and secretion of TNF-α from RAW 264.7 cells with IC50 values of 12.8 μM and 4.6 μM, respectively. Treatment with Cardamonin (37, 74, or 111 μM) inhibited Ang II-induced proliferation of rat VSMCs. Cardamonin suppressed Ang II-stimulated migration of rat VSMCs.
In Vivo	**Animal experiment**	
	Animal models:	Female ICR mice, Male Sprague-Dawley rats
	Dosage form:	Intraperitoneal injection, 0.02-20 mg/kg, daily for 4 consecutive days; oral administration, 3-30 mg/kg
	Applications:	In female ICR mice, Cardamonin (0.02–2 mg/kg, i.p.) inhibited NO production. In male Sprague-Dawley rats, Cardamonin (3-30 mg/kg, oral administration) significantly inhibited PBQ-induced writhing. Cardamonin dose-dependently increased the withdrawal response latencies in carrageenan-induced hyperalgesia.
	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]. Ahmad S, Israf D A, Lajis N H, et al. Cardamonin, inhibits pro-inflammatory mediators in activated RAW 264.7 cells and whole blood[J]. European journal of pharmacology, 2006, 538(1): 188-194.

[2]. Shen Y J, Zhu X X, Yang X, et al. Cardamonin inhibits angiotensin II-induced vascular smooth muscle cell proliferation and migration by downregulating p38 MAPK, Akt, and ERK phosphorylation[J]. Journal of natural medicines, 2014, 68(3): 623-629.

[3]. Takahashi A, Yamamoto N, Murakami A. Cardamonin suppresses nitric oxide production via blocking the IFN-γ/STAT pathway in endotoxin-challenged peritoneal macrophages of ICR mice[J]. Life sciences, 2011, 89(9): 337-342.

[4]. Park MK, et al. Novel anti-nociceptive effects of cardamonin via blocking expression of cyclooxygenase-2 andtransglutaminase-2. Pharmacol Biochem Behav. 2014 Mar;118:10-5.

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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