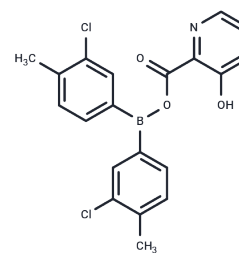


AN0128

Chemical Properties

CAS No. : 872044-70-7
 Formula: C₂₀H₁₆Cl₂NO₃
 Molecular Weight: 400.06
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

Description	AN0128 (CRM-0005) is an anti-inflammatory boron-containing antibacterial agent that inhibits <i>S. aureus</i> , <i>S. epidermidis</i> , <i>P. acnes</i> , <i>B. subtilis</i> , and suppresses pro-inflammatory cytokine production in macrophage cell lines by inhibiting the p38 MAP kinase signaling pathway. It can be used in dermatological research.
Targets(IC50)	Antibacterial, Liver X Receptor
In vitro	The minimum inhibitory concentration (MIC) of AN0128 (compound 2g) against <i>S. aureus</i> , <i>S. epidermidis</i> , <i>P. acnes</i> and <i>B. subtilis</i> were 1, 0.5, 0.3 and 1 µg/mL, respectively.[1] AN0128 (10 µM; 24-48 h) showed potent inhibition of the release of pro-inflammatory cytokines (TNF-α and IL-1β) in human peripheral blood mononuclear cells (PBMCs), but did not inhibit IFN-γ or IL-4 release. [1]
In vivo	AN0128 (1%, 5%; topical application daily for 7 days) significantly inhibited the formation of inflammatory infiltrates and reduced bone loss. [2]

Solubility Information

Solubility	DMSO: 100 mg/mL (249.96 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (10 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4996 mL	12.4981 mL	24.9963 mL
5 mM	0.4999 mL	2.4996 mL	4.9993 mL
10 mM	0.250 mL	1.2498 mL	2.4996 mL
50 mM	0.050 mL	0.250 mL	0.4999 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Baker SJ, et al. Identification of a novel boron-containing antibacterial agent (AN0128) with anti-inflammatory activity, for the potential treatment of cutaneous diseases. *Bioorg Med Chem Lett*. 2006 Dec 1;16(23):5963-7.
- Ciaravino V, et al. An assessment of the genetic toxicology of novel boron-containing therapeutic agents. *Environ Mol Mutagen*. 2013 Jun;54(5):338-46.
- Baker Stephen J, et al. Identification of a novel boron-containing antibacterial agent (AN0128) with anti-inflammatory activity, for the potential treatment of cutaneous diseases. *Bioorganic & medicinal chemistry letters* 16.23 (2006): 5963-5967.

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