Product Data Sheet

Chemical Properties

Product Name: AN-2728
Cas No.: 906673-24-3
M.Wt.: 251.05
Formula: C14H10BNO3
Synonyms: AN2728; AN 2728
Chemical Name: 4-((1-hydroxy-1,3-dihydrobenzo[c][1,2]oxaborol-5-yl)oxy)benzonitrile
Canonical SMILES: N#CC1=CC=C(OC2=CC=C3C(COB3O)=C2)C=C1
Solubility: >12.6mg/mL in DMSO
Storage: Store at -20°C
General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Shopping Condition: Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Metabolism
Pathways: PDE
Description:
AN-2728 is an inhibitor of PDE4 with IC50 value of 0.49 μM [1]. PDE4 is a phosphodiesterase and plays an important role in the chronic inflammation associated with psoriasis and atopic dermatitis [2].
AN-2728 is a boron-containing, anti-inflammatory, topically administered compound that inhibits PDE4 activity and suppresses the release of TNF-α, IL-23, IL-12 and other cytokines [2]. In cell based assays, AN-2728 inhibited cytokine release of TNF-α, IL-2, IFN-γ, IL-5 and IL-10 with IC50
values of 0.54, 0.61, 0.83, 2.4 and 5.3 μM, respectively [1]. AN-2728 was well tolerated and had good therapeutic potential. AN-2728 is now in clinical development for the treatment of psoriasis and atopic dermatitis [2].

Reference:

Protocol

Cell experiment:
- Cell lines: Peripheral blood mononuclear cells (PBMCs)
- Preparation method: The solubility of this compound in DMSO is >12.6mg/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
- Applications: AN-2728 showed a broad range of potent cytokine release inhibition, such as TNF-α, IL-23, IL-12 and other cytokines.

Animal experiment [3]:
- Animal models: Phorbol ester-induced mouse ear edema model
- Dosage form: 1 mg/ear×2
- 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.

Reference:
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. 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.