Product Data Sheet

Chemical Properties

Product Name: Dexamethasone (DHAP)

Cas No.: 50-02-2

M.Wt: 392.46

Formula: C22H29FO5

Synonyms: N/A

Chemical Name: (8R,9R,10S,11S,13S,14S,16R,17R)-9-fluoro-11,17-dihydroxy-17-(2-hydroxyacetyl)-10,13,16-trimethyl-6,7,8,9,10,11,12,13,14,15,16,17-dodecahydro-3H-cyclopenta[a]phenanthren-3-one

Canonical SMILES: O=C1C=C[C@@]2(C)C(CC[C@@I](I)[H])(C@@)][F]2(F)[C@@H](O)C[C@@]4(C)[C@@]3(I)[H]C[C@@H](C)[C@@]4(C)(CO)=O)O=C1

Solubility: ≥19.623mg/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: Ubiquitination/Proteasome

Pathways: Autophagy

Description:
Glucocorticoid; anti-inflammatory. Reduces levels of activated NF-κB in immature dendritic cells (DCs) and inhibits differentiation into mature DCs. Induces differentiation of human mesenchymal stem cells (MSCs). Also induces autophagy in acute lymphoblas..
## Protocol

### Cell experiment:

<table>
<thead>
<tr>
<th>Cell lines</th>
<th>Human osteosarcoma cell lineMG-63</th>
</tr>
</thead>
</table>

| Preparation method  | The solubility of this compound in DMSO is >19.6mg/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        | In human osteoblast-like cell lineMG-63, Dexamethasone (Dex) exhibited dose-dependently upregulating RhoB protein expression. Dex treatment for above 2 days could significantly inhibit the growth of MG-63 cells in a dose dependent way. |

### Animal experiment [3]:

<table>
<thead>
<tr>
<th>Animal models</th>
<th>LPS-induced neuroinflammation mice</th>
</tr>
</thead>
</table>

| Dosage form         | 0.25 mg/kg; intravenous (IV) or intranasal (IN). |

| Applications        | In LPS-induced neuroinflammation mice, IN administration of DX significantly reduced the level of IL-6 in the brain extracts and reduced the percentage of GFAP+ brain cells one day after treatment. Compared with IV route, higher levels of DX are observed in the cerebrovasculature of mice after IN administration. |

| 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. |

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**Reference:**


[2]. Meneses G1, Gevorkian G1, Florentino A1, et al. INTRANASAL DELIVERY OF DEXAMETHASONE
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. 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.

ApexBio Technology

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