Dexamethasone
NF-κB and MAPK inhibitor
Catalog # tlrl-dex
For research use only
Version # 13K15-MM

PRODUCT INFORMATION
Content:
100 mg Dexamethasone provided lyophilized

Storage and stability:
- Dexamethasone is shipped at room temperature. Store lyophilized product at 4°C. Lyophilized product is stable for 1 year when properly stored.
- Solutions of dexamethasone are stable for 1 month at 4°C. Protect from light.

DESCRIPTION
Dexamethasone is a synthetic glucocorticoid compound with potent anti-inflammatory activities. It represses a large set of pro-inflammatory genes by blocking NF-κB and MAPK activation during TLR engagement inhibits NF-κB and specific MAPKs depending on the TLR ligand and whether the adapters MyD88 and TRIF are activated individually or coincidently.


CHEMICAL PROPERTIES
CAS number: 50-02-2
Synonym: Prednisolone F
Formula: C₂₂H₂₉FO₅
Molecular weight: 392.46
Solubility: approximately 25 mg/ml in ethanol
Appearance: White powder

METHODS
Preparation of stock solution (1 mg/ml)
To obtain a 1 mg/ml stock solution:
1. Weigh 5 mg of dexamethasone.
2. Add 5 ml ethanol to 5 mg dexamethasone. This provides a solution at 1 mg/ml (2.55 mM).
3. Vortex until complete solubilization.
4. Aliquot and store at 4˚C.
5. Once dexamethasone is solubilized, dilutions can be prepared by adding sterile culture medium. To obtain a solution at 20 μg/ml (51 μM), add 49 ml of culture medium to 1 ml of the stock solution. Aqueous solutions should not be stored for more than one day.

Working concentration: 100 nM (40 ng/ml)

NF-κB and MAPK inhibition:
To assess the role of NF-κB and MAPK, pretreat cells, such as macrophages or HEK293 cells transfected with one or several TLR genes, for 1 hour with or without dexamethasone at 100 nM and then incubate at 37°C with the appropriate TLR ligand for 1 to 6 hours. Detect NF-κB and MAPK inhibition using the appropriate detection system.

RELATED PRODUCTS

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<thead>
<tr>
<th>Product</th>
<th>Catalog Code</th>
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<tbody>
<tr>
<td>pUNO1-hTLR2 (plasmid with human TLR2 gene)</td>
<td>puno1-htlr2</td>
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<tr>
<td>pUNO-mTLR2 (plasmid with mouse TLR2 gene)</td>
<td>puno-mtlr2</td>
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<tr>
<td>Pam3CSK4 (TLR2 ligand)</td>
<td>tlr1-pms</td>
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<tr>
<td>pUNO-hTLR3 (plasmid with human TLR3 gene)</td>
<td>puno-htrl3</td>
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<tr>
<td>pUNO-mTLR3 (plasmid with mouse TLR3 gene)</td>
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<tr>
<td>Poly(I:C) HMW (TLR3 ligand)</td>
<td>tlr1-pic</td>
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