

Dexamethasone

NF- κ B and MAPK inhibitor

Catalog # tlr-dex

For research use only

Version # 13K15-MM

PRODUCT INFORMATION

Content:

100 mg Dexamethasone

Storage and stability:

- Dexamethasone is shipped at room temperature. Store at 4°C. 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- κ B and MAPK activation during TLR engagement inhibits NF- κ B and specific MAPKs depending on the TLR ligand and whether the adapters MyD88 and TRIF are activated individually or coincidently¹.

1. **Bhattacharyya S. *et al.*, 2010.** TAK1 targeting by glucocorticoids determines JNK and IkappaB regulation in Toll-like receptor-stimulated macrophages. *Blood*. 115(10):1921-31.

CHEMICAL PROPERTIES

CAS number: 50-02-2

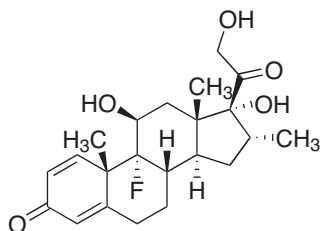
Synonym: Prednisolone F

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. Aliquote 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 μ g/ml (51 μ M), 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- κ B and MAPK inhibition:

To assess the role of NF- κ B 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- κ B and MAPK inhibition using the appropriate detection system.

RELATED PRODUCTS

Product	Catalog Code
pUNO1-hTLR2 (plasmid with human TLR2 gene)	puno1-htlr2
pUNO-mTLR2 (plasmid with mouse TLR2 gene)	puno-mtlr2
Pam3CSK4 (TLR2 ligand)	tlr1-pms
pUNO-hTLR3 (plasmid with human TLR3 gene)	puno-htlr3
pUNO-mTLR3 (plasmid with mouse TLR3 gene)	puno-mtlr3
Poly(I:C) HMW (TLR3 ligand)	tlr1-pic

TECHNICAL SUPPORT

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