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DATASHEET

Dexamethasone

Product overview

Name Dexamethasone

Cat No HB2521
Alternative names Dex
Biological action Agonist
Purity >98%

Description Anti-inflammatory synthetic glucocorticoid. Induces hMSC differentiation. Apoptosis inducer.

Images



Biological Data

Biological description

Synthetic glucocorticoid. Differentiates mesenchymal stem cells (MSCs) into adipogenic, chondrogenic and osteogenic lineages.

Commonly used with ascorbic acid and $\beta\text{-}Gly$ for osteogenic differentiation of stem cells.

Also shows potent anti-inflammatory and immunospressant effects. Active in vivo.

Recently investigated as part of COVID-19 compound repurposing.

Apoptosis inducer.

Water soluble dexamethasone also available.

Solubility & Handling

Solubility overview Storage instructions Storage of solutions

Soluble in DSMO (100mM) -20°C (protect from light)

Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Stable for ambient temperature shipping. Follow storage instructions on receipt.

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

Shipping Conditions Important

Chemical Data

Chemical name Molecular Weight Chemical structure $(11\beta,16\alpha)\text{-9-Fluoro-}11,17,21\text{-trihydroxy-}16\text{-methyl-pregna-}1,4\text{-diene-}3,20\text{-dione}$

392.47

HO HO HO

Molecular Formula $C_{22}H_{29}FO_5$ CAS Number50-02-2PubChem identifier5743

C[C@@H]1C[C@H]2[C@@H]3CCC4=CC(=O)C=C[C@@]4([C@]3([C@H](C[C@@]2([C@]1(C(=O)))))

CO)O)C)O)F)C

InChi InChi=1S/C22H29FO5/c1-12-8-16-15-5-4-13-9-14(25)6-7-19(13,2)21(15,23)17(26)10-20(16,3)22(12

 $, 28) \\ 18(27) \\ 11 - 24/h \\ 6 - 7, \\ 9, 12, 15 - 17, 24, 26, 28H, \\ 4 - 5, \\ 8, 10 - 11H2, \\ 1 - 3H3/t12 - , 15 + , 16 + , 17 + , 19 + , 20 + , 21 + , 22 + , 22 + , 23 + , 23 + , 23 + , 23 + , 24$

+/m1/s1

InChiKey UREBDLICKHMUKA-CXSFZGCWSA-N

MDL number MFCD00064136

References

SMILES

Dexamethasone alleviates tumor-associated brain damage and angiogenesis.

Fan Z et al (2014) PLoS One 9(4)

PubMedID 24714627

Glucocorticoid receptor antagonism by cyproterone acetate and RU486.

Honer C *et al* (2003) Mol Pharmacol 63(5) **PubMedID**12695529

Short bouts of mechanical loading are as effective as dexamethasone at inducing matrix production by human bone marrow mesenchymal stem cell.

Sittichokechaiwut A et al (2010) Eur Cell Mater 20
PubMedID 20648425