

Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@hellobio.com



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 β -Gly for osteogenic differentiation of stem cells. Also shows potent anti-inflammatory and immunosuppressant effects. Active <i>in vivo</i> . Recently investigated as part of COVID-19 compound repurposing. Apoptosis inducer. Water soluble dexamethasone also available.
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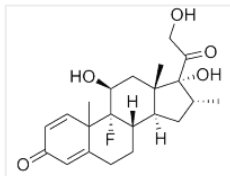
Solubility & Handling

Storage instructions	-20 °C (protect from light)
Solubility overview	Soluble in DMSO (100mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name
Molecular Weight
Chemical structure

(11 β ,16 α)-9-Fluoro-11,17,21-trihydroxy-16-methyl-pregna-1,4-diene-3,20-dione
392.47



Molecular Formula
CAS Number
PubChem identifier
SMILES

C₂₂H₂₉FO₅
50-02-2
5743
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/h6-7,9,12,15-17,24,26,28H,4-5,8,10-11H2,1-3H3/t12-,15+,16+,17+,19+,20+,21+,22+/m1/s1

InChiKey

UREBDLICKHMUKA-CXSFZGCWSA-N

MDL number

MFCD00064136

References

[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)

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[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](#)
