



Data Sheet

Research Use Only

Compound Name

Dexamethasone

Catalog Number

SM47

Activity

Dexamethasone is a potent synthetic member of the glucocorticoid class of steroid drugs that has anti-inflammatory and immunosuppressant properties. Dexamethasone is used to treat many inflammatory and autoimmune conditions, such as rheumatoid arthritis and bronchospasm.

Purity

>98%

Formula

$C_{22}H_{29}FO_5$

Solubility

DMSO

Alternative Names

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

Effect

Dexamethasone inhibits induction of nitric oxide synthase. Dexamethasone reduces levels of activated NF- κ B in immature dendritic cells (DCs) and inhibits differentiation into mature DCs. This biomolecule induces differentiation of human mesenchymal stem cells (MSCs). It also induces autophagy in acute lymphoblastic leukemia (ALL) cell lines.

CAS

50-02-2

Molecular Weight

392.47

Stability

Stable at -20°C. Keep away from direct sunlight.

References

1. Xiao, Y., et al. 2010. J Tissue Eng Regen Med. 4(5): 374-386. PMID: 20058244
2. Ankrum, JA., et al. 2014. Sci Rep. 4: 4645. PMID: 24717973