

Betamethasone 21-phosphate (sodium salt hydrate)

Chemical Properties

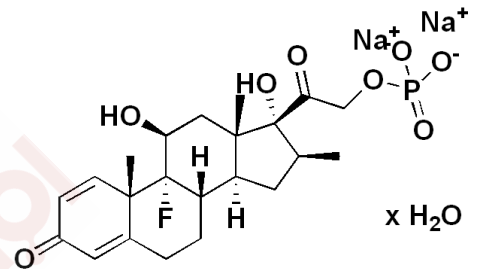
CAS No. :

Formula: C₂₂H₂₈FNa₂O₈P.xH₂O

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

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| Description | Betamethasone 21-phosphate is a synthetic glucocorticoid.1It prevents increases in macrophage and eosinophil numbers in bronchoalveolar lavage fluid (BALF) and decreases in blood leukocyte numbers in a guinea pig model of parainfluenza-3 viral infection when administered at a dose of 8 mg/kg but does not prevent airway hyperresponsiveness after infection.2Betamethasone 21-phosphate inhibits cell infiltration into the aqueous humor in a rat model of endotoxin-induced uveitis when administered topically or subcutaneously at doses of 0.01-1% or 1 mg/kg, respectively. 3It increases maximal lung pressure volume curves in fetal sheep when administered to pregnant ewes at 0.75 gestation at doses of 80 and 170 µg/kg.1Betamethasone 21-phosphate increases body weight, impairs learning and memory, increases anxiolytic behavior, and reduces hippocampal neurogenesis in CD-1 mice but reduces body weight and increases neurogenesis with no effect on anxiety in high-anxiety DBA/2 mice when administered at a dose of approximately 25 mg/kg per day in the drinking water for seven weeks.4Formulations containing betamethasone 12-phosphate and betamethasone acetate have been used in the treatment of severe allergic conditions and a variety of immune-related conditions. |
| Targets(IC50) | Others |

Solubility Information

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| Solubility | PBS (pH 7.2): 10 mg/mL,Sonication is recommended. H2O: 30 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
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Reference

- Loehle, M., Schwab, M., Kadner, S., et al.Dose-response effects of betamethasone on maturation of the fetal sheep lungAm. J. Obstet. Gynecol.202(2)186.e181-186.e187(2010)
- Leusink-Muis, A., Ten Broeke, R., Folkerts, G., et al.Betamethasone prevents virus-induced airway inflammation but not airway hyperresponsiveness in guinea pigsClin. Exp. Allergy29(Suppl. 2)82-85(1999)
- Tsuji, F., Sawa, K., Kato, M., et al.The effects of betamethasone derivatives on endotoxin-induced uveitis in ratExp. Eye Res.64(1)31-36(1997)
- Aiello, R., Crupi, R., Leo, A., et al.Long-term betamethasone 21-phosphate disodium treatment has distinct effects in CD1 and DBA/2 mice on animal behavior accompanied by opposite effects on neurogenesisBehav. Brain Res. 278155-166(2015)

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