

PRODUCT INFORMATION



Betamethasone 21-phosphate (sodium salt hydrate)

Item No. 29778

Formal Name: 9-fluoro-11 β ,17-dihydroxy-16 β -methyl-21-(phosphonoxy)-pregna-1,4-diene-3,20-dione, disodium salt, hydrate

MF: C₂₂H₂₈FO₈P • 2Na [XH₂O]

FW: 516.4

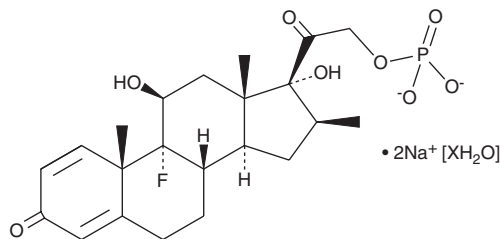
Purity: \geq 95%

UV/Vis.: λ_{max} : 243 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: \geq 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Betamethasone 21-phosphate (sodium salt hydrate) is supplied as a crystalline solid. Aqueous solutions of betamethasone 21-phosphate (sodium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of betamethasone 21-phosphate (sodium salt hydrate) in PBS, pH 7.2, is approximately 10 mg/ml. It is also soluble in water. The solubility of betamethasone 21-phosphate (sodium salt hydrate) in water is approximately 30 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Betamethasone 21-phosphate is a synthetic glucocorticoid.¹ It 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.² Betamethasone 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.³ It increases maximal lung pressure volume curves in fetal sheep when administered to pregnant ewes at 0.75 gestation at doses of 80 and 170 μ g/kg.¹ Betamethasone 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.⁴ Formulations containing betamethasone 12-phosphate and betamethasone acetate have been used in the treatment of severe allergic conditions and a variety of immune-related conditions.

References

1. Loehle, M., Schwab, M., Kadner, S., et al. *Am. J. Obstet. Gynecol.* **202(2)**, 186.e1-186.e7 (2010).
2. Leusink-Muis, A., Ten Broeke, R., Folkerts, G., et al. *Clin. Exp. Allergy* **29(Suppl. 2)**, 82-85 (1999).
3. Tsuji, F., Sawa, K., Kato, M., et al. *Exp. Eye Res.* **64(1)**, 31-36 (1997).
4. Aiello, R., Crupi, R., Leo, A., et al. *Behav. Brain Res.* **278**, 155-166 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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