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- Trockeneiszuschlag
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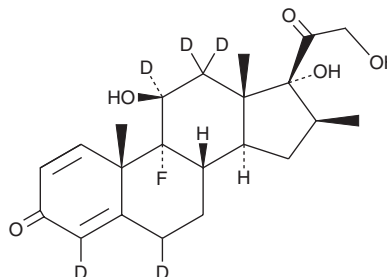
PRODUCT INFORMATION



Betamethasone-d₅

Item No. 39560

CAS Registry No.: 2244574-92-1
Formal Name: 9-fluoro-11,17,21-trihydroxy-16-methyl-pregna-1,4-diene-3,20-dione-4,6,11,12,12-d₅
Synonym: β-Methasone-d₅
MF: C₂₂H₂₄D₅FO₅
FW: 397.5
Chemical Purity: ≥90% (Betamethasone)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Betamethasone-d₅ is intended for use as an internal standard for the quantification of betamethasone (Item No. 20363) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Betamethasone-d₅ is supplied as a solid. A stock solution may be made by dissolving the betamethasone-d₅ in the solvent of choice, which should be purged with an inert gas. Betamethasone-d₅ is soluble in methanol and DMSO.

Description

Betamethasone is a synthetic corticosteroid.¹ *In vivo*, betamethasone (5 mg/kg) reduces bronchoalveolar lavage fluid (BALF) matrix metalloproteinase-2 (MMP-2) and MMP-9 activities, TNF-α levels, and neutrophil number in a mouse model of LPS-induced lung injury. Prenatal administration of betamethasone (0.1 mg/kg) improves neonatal lung function but decreases hippocampal and corpus callosum neuron density and induces motor function deficits in a rabbit model of late preterm birth.² It also extends gestational length in a rat model of preterm labor induced by high mobility group protein B1 (HMGB1).³ Formulations containing betamethasone have been used in the treatment of inflammatory skin conditions and prenatally to promote fetal lung maturation.

References

1. Corbel, M., Lagente, V., Théret, N., *et al.* Comparative effects of betamethasone, cyclosporin and nedocromil sodium in acute pulmonary inflammation and metalloproteinase activities in bronchoalveolar lavage fluid from mice exposed to lipopolysaccharide. *Pulm. Pharmacol. Ther.* **12(3)**, 165-171 (1999).
2. van der Merwe, J., van der Veecken, L., Inversetti, A., *et al.* Neurocognitive sequelae of antenatal corticosteroids in a late preterm rabbit model. *Am. J. Obstet. Gynecol.* **226(6)**, 850.e1-850.e21 (2022).
3. Galaz, J., Romero, R., Arenas-Hernandez, M., *et al.* Betamethasone as a potential treatment for preterm birth associated with sterile intra-amniotic inflammation: A murine study. *J. Perinat. Med.* **49(7)**, 897-906 (2021).

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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