

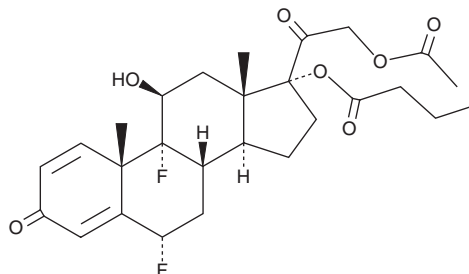
PRODUCT INFORMATION



Difluprednate

Item No. 23776

CAS Registry No.: 23674-86-4
Formal Name: 21-(acetyloxy)-6 α ,9-difluoro-11 β -hydroxy-17-(1-oxobutoxy)-pregna-1,4-diene-3,20-dione
Synonym: W-6309
MF: C₂₇H₃₄F₂O₇
FW: 508.6
Purity: \geq 98%
UV/Vis.: λ_{max} : 238 nm
Supplied as: A 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

Difluprednate is supplied as a solid. A stock solution may be made by dissolving the difluprednate in the solvent of choice, which should be purged with an inert gas. Difluprednate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of difluprednate in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Difluprednate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, difluprednate should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Difluprednate has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Difluprednate is a synthetic glucocorticoid that potently activates the glucocorticoid receptor ($K_i = 78$ pM).¹ *In vivo*, ocular administration of difluprednate (0.05% w/v) increases intraocular pressure in sheep.² Formulations containing difluprednate have been used to treat diabetic macular edema and inflammation following cataract surgery.

References

1. Tajika, T., Waki, M., Tsuzuki, M., *et al.* Pharmacokinetic features of difluprednate ophthalmic emulsion in rabbits as determined by glucocorticoid receptor-binding bioassay. *J. Ocul. Pharmacol. Ther.* **27(1)**, 29-34 (2011).
2. Borrás, T., Buie, L.K., and Spiga, M.G. Inducible scAAV2.GRE.MMP1 lowers IOP long-term in a large animal model for steroid-induced glaucoma gene therapy. *Gene Ther.* **23(5)**, 438-449 (2016).

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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