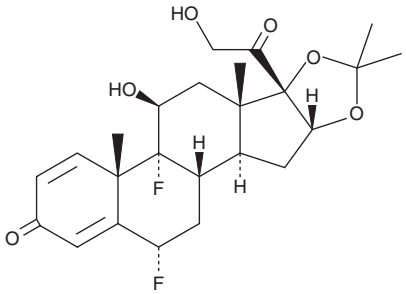
PRODUCT INFORMATION

Fluocinolone acetonide

Item No. 23027

CAS Registry No.:	67-73-2
Formal Name:	6α,9-difluoro-11β,21-dihydroxy-16α,17-[(1-methylethylidene) *bis*(oxy)]-pregna-1,4-diene-3,20-dione
Synonym:	NSC 92339
MF:	$C_{24}H_{30}F_2O_6$
FW:	452.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 239 nm
Supplied as:	A crystalline 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

Fluocinolone acetonide is supplied as a crystalline solid. A stock solution may be made by dissolving the fluocinolone acetonide in the solvent of choice. Fluocinolone acetonide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of fluocinolone acetonide in ethanol is approximately 5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Fluocinolone acetonide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, fluocinolone acetonide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Fluocinolone acetonide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Fluocinolone acetonide is a synthetic fluorinated corticosteroid that acts as a glucocorticoid receptor agonist (IC_{50} = 2.0 nM in a radioligand binding assay).[1] It increases transcriptional activity of the glucocorticoid receptor in HeLa cells (EC_{50} = 0.7 nM). It inhibits VEGF secretion in a dose-dependent manner and decreases TNF-α-induced angiogenesis in a chick chorioallantoic membrane assay.[2] Formulations containing fluocinolone acetonide have been used for the treatment of various skin, eye, ear, and nose conditions to reduce inflammation.

References

1. Nehmé, A., Ashton, P., and Kompella, U.B. Glucocorticoids with different chemical structures but similar glucocorticoid receptor potency regulate subsets of common and unique genes in human trabecular meshwork cells. *BMC Med. Genomics.* **2**, 58 (2009).
2. Ayalasomayajula, S.P., Lobenhofer, E.K., Stamer, W.D., *et al.* Fluocinolone inhibits VEGF expression via glucocorticoid receptor in human retinal pigment epithelial (ARPE-19) cells and TNF-α-induced angiogenesis in chick chorioallantoic membrane (CAM). *J. Ocul. Pharmacol. Ther.* **25(2)**, 97-103 (2009).

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