PRODUCT INFORMATION

Fluprostenol isopropyl ester-d_4

Item No. 9000936

Formal Name: 7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3R)-3-hydroxy-4-[3-(trifluoromethyl)phenoxy]-1-buten-1-yl]cyclopentyl]-5Z-heptenoic-d_4 acid, 1-methylethyl ester

Synonyms: Flu-Ipr-d_4, 16-*m*-trifluoromethylphenoxy tetranor $PGF_{2\alpha}$ isopropyl ester-d_4, Travoprost-d_4

MF: $C_{26}H_{31}D_4F_3O_6$

FW: 504.6

Chemical Purity: ≥98% (Fluprostenol isopropyl ester)

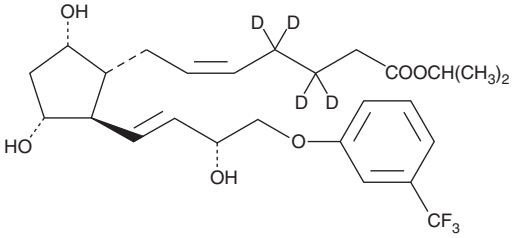
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0

UV/Vis.: λ_{max}: 222, 276 nm

Supplied as: A solution in methyl acetate

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

Fluprostenol isopropyl ester-d_4 is intended for use as an internal standard for the quantification of fluprostenol isopropyl ester (Item No. 16769) 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).

Fluprostenol isopropyl ester-d_4 is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of fluprostenol isopropyl ester-d_4 in these solvents is approximately 25, 20, and 30 mg/ml, respectively.

Description

Fluprostenol isopropyl ester is an analog of prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$; Item Nos. 16010 | 16020) and an isopropyl ester prodrug form of (+)-fluprostenol (Item No. 16768).[1,2] Fluprostenol isopropyl ester is an FP receptor agonist, inducing phosphoinositide turnover in HEK293 cells expressing the human ocular FP receptor with an EC_{50} value of 40.2 nM.[3] Topical application of fluprostenol isopropyl ester (0.01, 0.03, and 0.1 µg) induces miosis in conscious cats in a dose-dependent manner.[2] It reduces intraocular pressure in a cynomolgus monkey model of ocular hypertension when administered topically at doses of 0.1 and 0.3 µg twice per day. Formulations containing fluprostenol isopropyl ester have been used in the treatment of open-angle glaucoma and ocular hypertension.

References

1. Sorbera, L.A. and Castañer, J. Travoprost. *Drugs Future* **25(1)**, 41-45 (2000).
2. Hellberg, M.R., Sallee, V.L., McLaughlin, M.A., *et al.* Preclinical efficacy of travoprost, a potent and selective FP prostaglandin receptor agonist. *J. Ocul. Pharmacol. Ther.* **17(5)**, 421-432 (2001).
3. Sharif, N.A., Kelly, C.R., Crider, J.Y., *et al.* Ocular hypotensive FP prostaglandin (PG) analogs: PG receptor subtype binding affinities and selectivities, and agonist potencies at FP and other PG receptors in cultured cells. *J. Ocul. Pharmacol. Ther.* **19(6)**, 501-515 (2003).

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