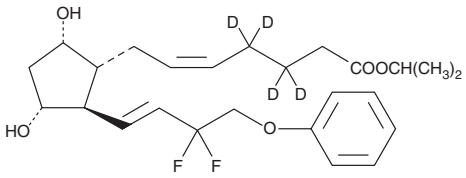
# PRODUCT INFORMATION

## Tafluprost-$d_4$

*Item No. 9002405*

**Formal Name:** (5Z)-7-[(1R,2R,3R,5S)-2-[(1E)-3,3-difluoro-4-phenoxy-1-buten-1-yl]-3,5-dihydroxycyclopentyl]-5-heptenoic acid-$d_4$, 1-methylethyl ester
**Synonym:** AFP-168-$d_4$
**MF:** $C_{25}H_{30}D_4F_2O_5$
**FW:** 456.6
**Chemcial Purity:** ≥98% (Tafluprost)
**Deuterium Incorporation:** ≥99% deuterated forms ($d_1$-$d_4$); ≤1% $d_0$
**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

Tafluprost-$d_4$ is intended for use as an internal standard for the quantification of tafluprost (Item No. 10005440) 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).

Tafluprost-$d_4$ 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 tafluprost-$d_4$ in these solvents is approximately 30 mg/ml.

### Description

Tafluprost is a prodrug form of the FP receptor agonist tafluprost (free acid) (Item No. 10005439) and a derivative of the prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$; Item Nos. 16010 | 16020).[1] It decreases pupillary diameter in cats when applied topically at doses of 0.0001 or 0.001% v/v.[1] Ocular administration of tafluprost (0.0005% v/v) reduces intraocular pressure in normotensive monkeys.[1] Formulations containing tafluprost have been used in the treatment of open-angle glaucoma and ocular hypertension.

### Reference

1. Nakajima, T., Matsugi, T., Goto, W., *et al.* New fluoroprostaglandin $F_{2\alpha}$ derivatives with prostanoid FP-receptor agonistic activity as potent ocular-hypotensive agents. *Biol. Pharm. Bull.* **26(12)**, 1691-1695 (2003).



**CAYMAN CHEMICAL**
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
**PHONE:** [800] 364-9897
[734] 971-3335
**FAX:** [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM