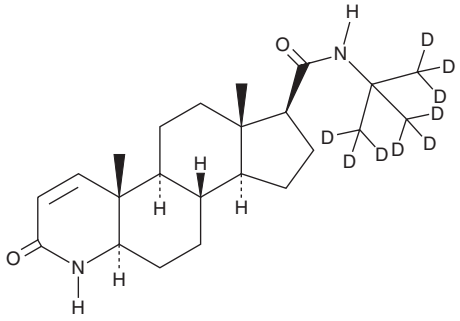
PRODUCT INFORMATION

Finasteride-d_9

Item No. 28482

CAS Registry No.: 1131342-85-2
Formal Name: (4aR,4bS,6aS,7S,9aS,9bS,11aR)-4a,6a-dimethyl-N-(2-(methyl-d_3)propan-2-yl-1,1,1,3,3,3-d_6)-2-oxo-2,4a,4b,5,6,6a,7,8,9,9a,9b,10,11,11a-tetradecahydro-1H-indeno[5,4-f]quinoline-7-carboxamide
Synonym: MK-906-d_9
MF: $C_{23}H_{27}D_9N_2O_2$
FW: 381.6
Chemical Purity: ≥95% (Finasteride)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_9); ≤1% d_0
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

Finasteride-d_9 is intended for use as an internal standard for the quantification of finasteride (Item No. 14938) 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).

Finasteride-d_9 is supplied as a solid. A stock solution may be made by dissolving the finasteride-d_9 in the solvent of choice, which should be purged with an inert gas. Finasteride-d_9 is slightly soluble in chloroform and methanol.

Description

Finasteride is a 4-azasteroid competitive inhibitor of 5α-reductase type II (IC_{50} = 4.2 nM) and a derivative of testosterone.[1] It is 100-fold selective for 5α-reductase type II over type I. Finasteride (10 µM) does not affect the growth of androgen-refractory PC3 prostate cancer cells but increases the protein levels of Nrf2 and heme oxygenase-1 (HO-1).[2] It decreases prostatic diameter and volume, as well as dihydrotestosterone, but not testosterone, serum levels in dogs with spontaneous benign prostatic hypertrophy when administered at doses of 0.1 and 0.5 mg/kg.[3] Finasteride reduces testosterone-induced type I procollagen and TGF-β1 protein levels in cultured human scalp dermal fibroblasts in a model of androgenic alopecia when applied at a concentration of 0.1 µM.[4] Formulations containing finasteride have been used in the treatment of benign prostatic hyperplasia and androgenic alopecia in men.

References

1. Flores, E., Bratoeff, E., Cabeza, M., *et al. Mini Rev. Med. Chem.* **3(3)**, 225-237 (2003).
2. Yun, D.-K., Lee, J., and Keum, Y.-S. *Biomol. Ther. (Seoul)* **21(1)**, 49-53 (2013).
3. Sirinarumitr, K., Johnston, S.D., Kustritz, M.V.R., *et al. J. Am. Vet. Med. Assoc.* **218(8)**, 1275-1280 (2001).
4. Yoo, H.G., Kim, J.S., Lee, S.R., *et al. Biol. Pharm. Bull.* **29(6)**, 1246-1250 (2006).

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