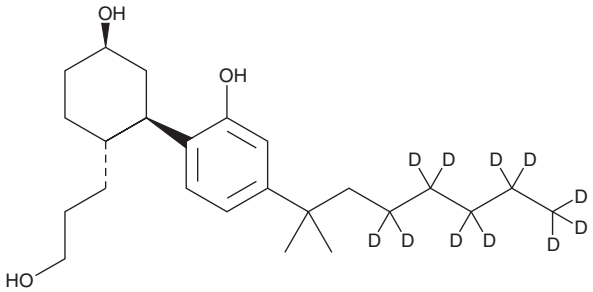
PRODUCT INFORMATION

(±)-CP 55,940-d_{11}

Item No. 10703

Formal Name:	*rel*-5-(1,1-dimethylheptyl-3,3,4,4,5,5,6,6,7,7,7-d_{11})-2-[(1R,2R,5R)-5-hydroxy-2-(3-hydroxypropyl)cyclohexyl]-phenol
MF:	$C_{24}H_{29}D_{11}O_3$
FW:	387.6
Chemical Purity:	≥98% ((±)-CP 55,940)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_{11}); ≤1% d_0
UV/Vis.:	λ_{max}: 219, 276 nm
Supplied as:	A solution in methanol
Storage:	-20°C
Stability:	≥1 year



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

Laboratory Procedures

(±)-CP 55,940-d_{11} is intended for use as an internal standard for the quantification of (±)-CP 55,940 (Item No. 13241) 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).

(±)-CP 55,940-d_{11} is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol 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 (±)-CP 55,940-d_{11} in these solvents is approximately 30 mg/ml.

(±)-CP 55,940-d_{11} is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of (±)-CP 55,940-d_{11} should be diluted with the aqueous buffer of choice. (±)-CP 55,940-d_{11} has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(±)-CP 55,940 is a potent, non-selective cannabinoid (CB) receptor agonist (K_is = 5 and 1.8 nM for human CB_1 and CB_2, respectively).[1] It stimulates [^{35}S]GTPγS binding to rat cerebellar membranes (EC_{50}s = 0.22-0.96 nM).[2] *In vivo*, (±)-CP 55,940 induces analgesia in the tail clamp, hot plate, tail flick, flinch jump, and PBQ-induced writhing tests with 50% maximum possible effect (MPE_{50}) values of 0.46, 1.11, 0.55, 0.63, and 0.29 mg/kg, respectively.[3] (±)-CP 55,940 also decreases the discrimination index (DI) of female, but not male, rats in the object location task as well as the DI of male, but not female, rats in the novel object recognition task.[4]

References

1. Pertwee, R.G. *Curr. Med. Chem.* **6(8)**, 635-664 (1999).
2. Griffin, G., Atkinson, P.J., Showalter, V.M., *et al. J. Pharmacol. Exp. Ther.* **285(2)**, 553-560 (1998).
3. Howlett, A.C., Johnson, M.R., Melvin, L.S., *et al. Mol. Pharmacol.* **33(3)**, 297-302 (1987).
4. Mateos, B., Borcel, E., Loriga, R., *et al. J. Psychopharmacol.* **25(12)**, 1676-1690 (2011).

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