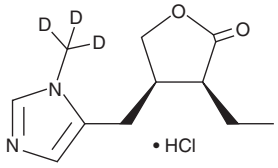
PRODUCT INFORMATION

(+)-Pilocarpine-d_3 (hydrochloride)

Item No. 29078

Formal Name:	(3S,4R)-3-ethyldihydro-4-[(1-(methyl-d_3)-1H-imidazol-5-yl)methyl]-2(3H)-furanone, monohydrochloride
Synonym:	Pilocarpine-d_3
MF:	$C_{11}H_{13}D_3N_2O_2$ • HCl
FW:	247.7
Chemical Purity:	≥98% ((+)-Pilocarpine)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_3); ≤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

(+)-Pilocarpine-d_3 (hydrochloride) is intended for use as an internal standard for the quantification of (+)-pilocarpine (Item No. 14487) 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).

(+)-Pilocarpine-d_3 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the (+)-pilocarpine-d_3 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. (+)-Pilocarpine-d_3 (hydrochloride) is soluble in organic solvents such as ethanol and DMSO.

Description

(+)-Pilocarpine is a muscarinic acetylcholine receptor agonist that binds to human hippocampal, pons, and submandibular gland membranes, which are endogenously enriched in the M_1, M_2, and M_3 receptor subtypes, respectively (apparent K_is = 6, 8.2, and 6.9 µM, respectively).[1] It induces salivary secretion in rats when administered intraperitoneally at a dose of 1 mg/kg.[2] Topical administration of (+)-pilocarpine inhibits methylcellulose-induced increases in intraocular pressure in rabbits in a dose-dependent manner.[3] (+)-Pilocarpine is a chemoconvulsant that has been used in the generation of temporal lobe epilepsy animal models.[4-6] Formulations containing (+)-pilocarpine have been used in the treatment of elevated intraocular pressure and dry mouth.

References

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4. Kokate, T.G., Cohen, A.L., Karp, E., *et al. Neuropharmacology* **35(8)**, 1049-1056 (1996).
5. Ma, L., Wang, L., Yang, F., *et al. CNS Neurosci. Ther.* **20(10)**, 905-915 (2014).
6. Smolders, I., Khan, G.M., Manil, H., *et al. Br. J. Pharmacol.* **121(6)**, 1171-1179 (1997).

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