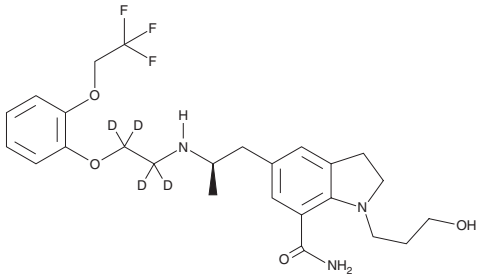
PRODUCT INFORMATION

Silodosin-d_4

Item No. 30236

CAS Registry No.: 1426173-86-5
Formal Name: (R)-1-(3-hydroxypropyl)-5-(2-((2-(2-(2,2,2-trifluoroethoxy)phenoxy)ethyl-1,1,2,2-d_4)amino)propyl)indoline-7-carboxamide
Synonym: KMD-3213-d_4
MF: $C_{25}H_{28}D_4F_3N_3O_4$
FW: 499.6
Chemical Purity: ≥98% (Silodosin)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤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

Silodosin-d_4 is intended for use as an internal standard for the quantification of silodosin (Item No. 14866) 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).

Silodosin-d_4 is supplied as a solid. A stock solution may be made by dissolving the silodosin-d_4 in the solvent of choice, which should be purged with an inert gas. Silodosin-d_4 is soluble in the organic solvent methanol.

Description

Silodosin is an α_{1A}-adrenergic receptor (α_{1A}-AR) antagonist (K_i = 0.036 nM).[1] It is 583- and 56-fold selective for α_{1A}- over α_{1B}- and α_{1D}-ARs, respectively. Silodosin inhibits phenylephrine-induced contraction of isolated rabbit prostate (pA_2 = 10.05) more potently than rabbit or rat aorta (pA_2s = 9.36 and 8.13, respectively).[2] It inhibits norepinephrine-induced contraction of isolated human prostate tissue when used at concentrations ranging from 0.3 to 10 nM.[1] Silodosin (0.01-1,000 µg/kg) inhibits phenylephrine-induced increases in intraurethral pressure in rats.[3] Formulations containing silodosin have been used in the treatment of benign prostatic hyperplasia.

References

1. Moriyama, N., Akiyama, K., Murata, S., *et al*. KMD-3213, a novel α_{1A}-adrenoceptor antagonist, potently inhibits the functional α_1-adrenoceptor in human prostate. *Eur. J. Pharmacol*. **331(1)**, 39-42 (1997).
2. Yamagishi, R., Akiyama, K., Nakamura, S., *et al*. Effect of JMD-3213, an α_{1a}-adrenoceptor-selective antagonist, on the contractions of rabbit prostate and rabbit and rat aorta. *Eur. J. Pharm*. **315(1)**, 73-79 (1996).
3. Akiyama, K., Hora, M., Tatemichi, S., *et al*. KMD-3213, a uroselective and long-acting α_{1a}-adrenoceptor antagonist, tested in a novel rat model. *J. Pharmacol. Exp. Ther*. **291(1)**, 81-91 (1999).

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