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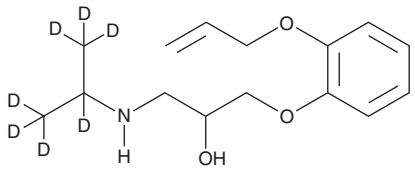
PRODUCT INFORMATION

Oxprenolol-d_7

Item No. 33274

CAS Registry No.: 1189805-10-4
Formal Name: 1-(2-(allyloxy)phenoxy)-3-((propan-2-yl-d_7)amino)propan-2-ol
Synonyms: dl-Alprenolol-d_7, dl-Oxprenolol-d_7
MF: $C_{15}H_{16}D_7NO_3$
FW: 272.4
Chemical Purity: ≥98% (Oxprenolol)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_7); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Oxprenolol-d_7 is intended for use as an internal standard for the quantification of oxprenolol (Item No. 16080) 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).

Oxprenolol-d_7 is supplied as a solid. A stock solution may be made by dissolving the oxprenolol-d_7 in the solvent of choice, which should be purged with an inert gas. Oxprenolol-d_7 is soluble in methanol, DMSO, and dimethyl formamide.

Description

Oxprenolol is an orally bioavailable β-adrenergic receptor (β-AR) antagonist (K_i = 7.10 nM in a radioligand binding assay using rat heart tissue).[1] It is non-selective and binds to both β_1- and β_2-ARs (K_ds = 2.09 and 1.35 nM in isolated rat heart and uterus, respectively).[2] Oxprenolol is selective for β-ARs over serotonin (5-HT) receptors in rat sarcolemmal membrane preparations (IC_{50}s = 4.13 and 23,300 nM, respectively), but it binds to 5-HT_{1A} receptors in rat hippocampus and 5-HT_{1B} in rat striatum (K_is = 94.2 and 642 nM, respectively).[3,4] Formulations containing oxprenolol have been used to treat hypertension and angina pectoris.[5]

References

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3. Moretti-Rojas, I., Ezrailson, E.G., Birnbaumer, L., *et al*. Serotonergic and adrenergic regulation of skeletal muscle metabolism in the rat. II. The use of [^{125}I]iodolysergic acid diethylamide and [^{125}I]iodopindolol as probes of sarcolemmal receptor function and specificity. *J. Biol. Chem*. **258(20)**, 12499-12508 (1983).
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5. Russo, M.E. and Covinsky, J.O. Oxprenolol hydrochloride: Pharmacology, pharmacokinetics, adverse effects and clinical efficacy. *Pharmacotherapy* **3(2)**, 68-81 (1983).

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