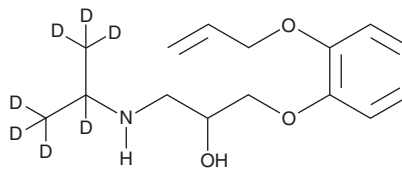


# PRODUCT INFORMATION



## Oxprenolol-d<sub>7</sub> Item No. 33274

**CAS Registry No.:** 1189805-10-4  
**Formal Name:** 1-(2-(allyloxy)phenoxy)-3-((propan-2-yl-d<sub>7</sub>)amino)propan-2-ol  
**Synonyms:** dl-Alprenolol-d<sub>7</sub>, dl-Oxprenolol-d<sub>7</sub>  
**MF:** C<sub>15</sub>H<sub>16</sub>D<sub>7</sub>NO<sub>3</sub>  
**FW:** 272.4  
**Chemical Purity:** ≥98% (Oxprenolol)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>7</sub>); ≤1% d<sub>0</sub>  
**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

Oxprenolol-d<sub>7</sub> 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<sub>7</sub> is supplied as a solid. A stock solution may be made by dissolving the oxprenolol-d<sub>7</sub> in the solvent of choice, which should be purged with an inert gas. Oxprenolol-d<sub>7</sub> is soluble in methanol, DMSO, and dimethyl formamide.

### Description

Oxprenolol is an orally bioavailable  $\beta$ -adrenergic receptor ( $\beta$ -AR) antagonist ( $K_i = 7.10$  nM in a radioligand binding assay using rat heart tissue).<sup>1</sup> It is non-selective and binds to both  $\beta_1$ - and  $\beta_2$ -ARs ( $K_d$ s = 2.09 and 1.35 nM in isolated rat heart and uterus, respectively).<sup>2</sup> Oxprenolol is selective for  $\beta$ -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<sub>1A</sub> receptors in rat hippocampus and 5-HT<sub>1B</sub> in rat striatum ( $K_s$  = 94.2 and 642 nM, respectively).<sup>3,4</sup> Formulations containing oxprenolol have been used to treat hypertension and angina pectoris.<sup>5</sup>

### References

1. Nagatomo, T., Sasaki, M., Tsuchihashi, H., *et al.* Binding characteristics of <sup>3</sup>H-dihydroalprenolol to  $\beta$ -adrenoceptors of rat heart treated with neuraminidase. *Jpn. J. Pharmacol.* **33**(4), 851-857 (1983).
2. Abrahamsson, T. The  $\beta_1$ - and  $\beta_2$ -adrenoceptor stimulatory effects of alprenolol, oxprenolol and pindolol: A study in the isolated right atrium and uterus of the rat. *Br. J. Pharmac.* **87**(4), 657-664 (1986).
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 [<sup>125</sup>I]iodolysergic acid diethylamide and [<sup>125</sup>I]iodopindolol as probes of sarcolemmal receptor function and specificity. *J. Biol. Chem.* **258**(20), 12499-12508 (1983).
4. Langlois, M., Brémont, B., Rousselle, D., *et al.* Structural analysis by the comparative molecular field analysis method of the affinity of  $\beta$ -adrenoceptor blocking agents for 5-HT<sub>1A</sub> and 5-HT<sub>1B</sub> receptors. *Eur. J. Pharmacol.* **244**(1), 77-87 (1993).
5. Russo, M.E. and Covinsky, J.O. Oxprenolol hydrochloride: Pharmacology, pharmacokinetics, adverse effects and clinical efficacy. *Pharmacotherapy* **3**(2), 68-81 (1983).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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