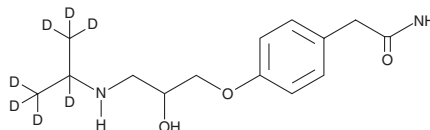


# PRODUCT INFORMATION



## (±)-Atenolol-d<sub>7</sub> Item No. 30018

**CAS Registry No.:** 1202864-50-3  
**Formal Name:** 4-[2-hydroxy-3-[[1-(methyl-d<sub>3</sub>)ethyl-1,2,2,2-d<sub>4</sub>]amino]propoxy]-benzeneacetamide  
**Synonyms:** (R,S)-Atenolol-d<sub>7</sub>, Duraatenol, ICI 66082  
**MF:** C<sub>14</sub>D<sub>7</sub>H<sub>15</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 273.4  
**Chemical Purity:** ≥95% ((±)-Atenolol)  
**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

(±)-Atenolol-d<sub>7</sub> is intended for use as an internal standard for the quantification of (±)-atenolol (Item No. 17250) 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).

(±)-Atenolol-d<sub>7</sub> is supplied as a solid. A stock solution may be made by dissolving the (±)-atenolol-d<sub>7</sub> in the solvent of choice, which should be purged with an inert gas. (±)-Atenolol-d<sub>7</sub> is slightly soluble in chloroform and methanol.

### Description

(±)-Atenolol is an antagonist of the β<sub>1</sub>-adrenergic receptor (β<sub>1</sub>-AR; K<sub>i</sub> = 1.14 μM).<sup>1</sup> It is selective for β<sub>1</sub>-ARs over β<sub>2</sub>-ARs (K<sub>i</sub> = 48.7 μM). (±)-Atenolol (200 mg/kg per day) delays the onset of hypertension in spontaneously hypertensive rats.<sup>2</sup> Formulations containing atenolol have been used in the treatment of high blood pressure.

### References

1. Golf, S., Bjornerheim, R., Erichsen, A., *et al.* Relative selectivity of different β-adrenoceptor antagonists for human heart β<sub>1</sub>- and β<sub>2</sub>-receptor subtypes assayed by a radioligand binding technique. *Scand. J. Clin. Lab. Invest.* **47(7)**, 719-723 (1987).
2. Richer, C., Boissier, J.R., and Giudicelli, J.F. Chronic atenolol treatment and hypertension development in spontaneously hypertensive rats. *Eur. J. Pharmacol.* **47(4)**, 393-400 (1978).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/17/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM