

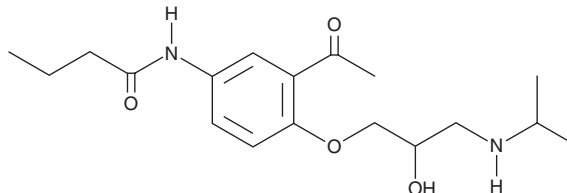
# PRODUCT INFORMATION



## Acebutolol

Item No. 36534

**CAS Registry No.:** 37517-30-9  
**Formal Name:** N-[3-acetyl-4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]phenyl]-butanamide  
**Synonym:** M&B 17803A  
**MF:** C<sub>18</sub>H<sub>28</sub>N<sub>2</sub>O<sub>4</sub>  
**FW:** 336.4  
**Purity:** ≥95%  
**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

Acebutolol is supplied as a solid. A stock solution may be made by dissolving the acebutolol in the solvent of choice, which should be purged with an inert gas. Acebutolol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of acebutolol in DMF is approximately 10 mg/ml and approximately 5 mg/ml in ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of acebutolol can be prepared by directly dissolving the solid in aqueous buffers. The solubility of acebutolol in PBS (pH 7.2) is approximately 0.30 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Acebutolol is an antagonist of  $\beta_1$ -adrenergic receptors ( $\beta_1$ -ARs;  $K_i = 125$  nM).<sup>1</sup> It is selective for  $\beta_1$ - over  $\beta_2$ -ARs ( $K_i = 7,070$  nM). *In vivo*, acebutolol decreases isoprenaline-induced tachycardia and diastolic hypotension in cats ( $ED_{50} = 0.09$  mg/kg for both).<sup>2</sup> Acebutolol (12.5, 25, and 50 mg/kg) inhibits ouabain-induced arrhythmias in rabbits, as well as protects against chloroform-induced ventricular fibrillation in mice ( $ED_{50} = 0.067$  mg/kg).<sup>3</sup> Formulations containing acebutolol have been used in the treatment of angina and irregular heartbeat.

### References

1. Tsuchihashi, H., Nakashima, Y., Kinami, J., *et al.* Characteristics of <sup>125</sup>I-iodocyanopindolol binding to  $\beta$ -adrenergic and serotonin-1B receptors of rat brain: Selectivity of  $\beta$ -adrenergic agents. *Jpn. J. Pharmacol.* **52(2)**, 195-200 (1990).
2. Basil, B., Jordan, R., Loveless, A.H., *et al.*  $\beta$ -Adrenoceptor blocking properties and cardioselectivity of M & B 17,803A. *Br. J. Pharmacol.* **48(2)**, 198-211 (1973).
3. Basil, B., Jordan, R., Loveless, A.H., *et al.* A comparison of the experimental anti-arrhythmic properties of acebutolol (M and B 17,803), propranolol and practolol. *Br. J. Pharmacol.* **50(3)**, 323-333 (1974).

#### 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.

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#### 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