

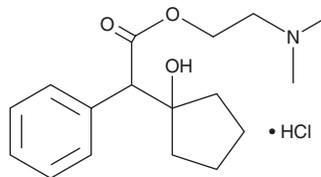
# PRODUCT INFORMATION



## Cyclopentolate (hydrochloride)

Item No. 23944

**CAS Registry No.:** 5870-29-1  
**Formal Name:**  $\alpha$ -(1-hydroxycyclopentyl)-benzeneacetic acid, 2-(dimethylamino) ethyl ester, monohydrochloride  
**Synonym:** ( $\pm$ )-Cyclopentolate  
**MF:**  $C_{17}H_{25}NO_3 \cdot HCl$   
**FW:** 327.9  
**Purity:**  $\geq 98\%$   
**Supplied as:** A solid  
**Storage:**  $-20^{\circ}C$   
**Stability:**  $\geq 4$  years



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

### Laboratory Procedures

Cyclopentolate (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the cyclopentolate (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Cyclopentolate (hydrochloride) is slightly soluble in DMSO and methanol.

### Description

Cyclopentolate is an antagonist of muscarinic acetylcholine receptors ( $K_i$ s = 1.62, 27.5, and 2.63 nM for  $M_1$ ,  $M_2$ , and  $M_3$  receptors, respectively).<sup>1</sup> It inhibits carbachol-induced contraction of isolated human iris sphincter, circular ciliary muscle, and longitudinal ciliary muscle ( $K_b$ s = 7.9, 15.8, and 12.5 nM, respectively).<sup>2</sup> Formulations containing cyclopentolate have been used to induce pupil dilation and to prevent the eye from accommodating for near vision.

### References

1. Lazareno, S., Buckley, N.J., and Roberts, F.F. Characterization of muscarinic  $M_4$  binding sites in rabbit lung, chicken heart, and NG108-15 cell. *Mol. Pharmacol.* **38(6)**, 805-815 (1990).
2. Ishikawa, H., DeSantis, L., and Patil, P.N. Selectivity of muscarinic agonists including ( $\pm$ )-aceclidine and antimuscarinics on the human intraocular muscles. *J. Ocul. Pharmacol. Ther.* **14(4)**, 363-373 (1998).

#### 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, 10/06/2022

#### 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