

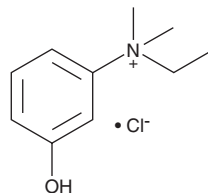
# PRODUCT INFORMATION



## Edrophonium (chloride)

Item No. 15928

**CAS Registry No.:** 116-38-1  
**Formal Name:** N-ethyl-3-hydroxy-N,N-dimethylbenzenaminium, monochloride  
**MF:** C<sub>10</sub>H<sub>16</sub>NO • Cl  
**FW:** 201.7  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 223, 277 nm  
**Supplied as:** A crystalline 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

Edrophonium (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the edrophonium (chloride) in the solvent of choice, which should be purged with an inert gas. Edrophonium (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of edrophonium (chloride) in these solvents is approximately 10, 2, and 0.5 mg/ml, respectively.

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 edrophonium (chloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of edrophonium (chloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Edrophonium (chloride) is an acetylcholinesterase (AChE) inhibitor that is known to prevent the breakdown of the neurotransmitter acetylcholine by binding specifically to its catalytic site.<sup>1</sup> It has been shown to inhibit AChE activity in human red blood cells, purified calf forebrain, and purified octopus brain with K<sub>i</sub> values of 0.2, 0.2, and 0.4 μM, respectively.<sup>2</sup> Edrophonium is often used as part of a battery of pharmacological tests to confirm a diagnosis of the autoimmune neuromuscular junction disorder, myasthenia gravis.<sup>3</sup>

### References

1. Roufogalis, B.D. and Wickson, V.M. Acetylcholinesterase: Specificity of the peripheral anionic site for cholinergic ligands. *Mol. Pharmacol.* **11(3)**, 352-360 (2011).
2. Boyle, N.A., Talesa, V., Giovannini, E., *et al.* Synthesis and study of thiocarbonate derivatives of choline as potential inhibitors of acetylcholinesterase. *J. Med. Chem.* **40(19)**, 3009-3013 (1997).
3. Juel, V.C. and Massey, J.M. Myasthenia gravis. *Orphanet J. Rare Dis.* **2**, 44 (2007).

#### 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, 10/17/2022

#### 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