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Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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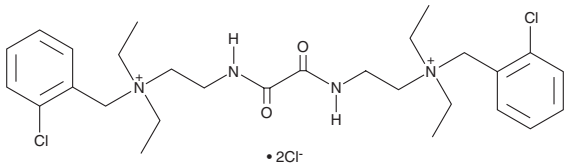
PRODUCT INFORMATION

Ambenonium (chloride)

Item No. 40845

CAS Registry No.: 115-79-7
Formal Name: N,N′-[(1,2-dioxo-1,2-ethanediyl) *bis*(imino-2,1-ethanediyl)] *bis*[2-chloro-N,N-diethyl-benzenemethanaminium, dichloride
Synonym: WIN 8,077
MF: $C_{28}H_{42}Cl_2N_4O_2 \bullet 2Cl$
FW: 608.5
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

Ambenonium (chloride) is supplied as a solid. A stock solution may be made by dissolving the ambenonium (chloride) in the solvent of choice, which should be purged with an inert gas. Ambenonium (chloride) is slightly soluble (0.1-1 mg/ml) in acetonitrile. It is also slightly soluble (0.1-1 mg/ml) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Ambenonium is an inhibitor of acetylcholinesterase (AChE; IC_{50} = 0.7 nM).[1] It is selective for AChE over butyrylcholinesterase (BChE; IC_{50} = 6.82 µM). Ambenonium (10 µM) increases the secretion of amyloid precursor protein (APP) in primary rat basal forebrain cells.[2] It induces repetitive firing of electrically stimulated gastrocnemius muscle in anesthetized cats when administered intra-arterially at a dose of 5 µg/animal.[3] Ambenonium (3 µg/animal) inhibits paralysis induced by the neuromuscular blocking agents tubocurarine or decamethonium (Item No. 24907) in anesthetized cats.[4] Formulations containing ambenonium have previously been used in the treatment of myasthenia gravis.

References

1. Musilek, K., Komloova, M., Holas, O., *et al.* Preparation and *in vitro* screening of symmetrical bis-isoquinolinium cholinesterase inhibitors bearing various connecting linkage - implications for early Myasthenia gravis treatment. *Eur. J. Med. Chem.* **46(2)**, 811-818 (2011).
2. Pakaski, M., Rakonczay, Z., and Kasa, P. Reversible and irreversible acetylcholinesterase inhibitors cause changes in neuronal amyloid precursor protein processing and protein kinase C level in vitro. *Neurochem. Int.* **38(3)**, 219-226 (2001).
3. Blaber, L.C., and Bowman, W.C. The effects of some drugs on the repetitive discharges produced in nerve and muscle by anticholinesterases. *Int. J. Neuropharmacol.* **2(1-2)**, 1-16 (1963).
4. Blaber, L.C. The antagonism of muscle relaxants by ambenonium and methoxyambenonium in the cat. *Br. J. Pharmacol. Chemother.* **15(3)**, 476-484 (1960).

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