

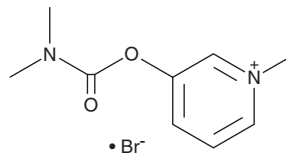
PRODUCT INFORMATION



Pyridostigmine (bromide)

Item No. 23831

CAS Registry No.: 101-26-8
Formal Name: 3-[[[dimethylamino]carbonyloxy]-1-methyl-pyridinium, monobromide
Synonyms: NSC 679759, Ro 1-5130
MF: C₉H₁₃N₂O₂ • Br
FW: 261.1
Purity: ≥98%
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

Pyridostigmine (bromide) is supplied as a solid. A stock solution may be made by dissolving the pyridostigmine (bromide) in water. The solubility of pyridostigmine (bromide) in water is approximately 100 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Pyridostigmine is an inhibitor of acetylcholinesterase (AChE) and butyrylcholinesterase (BChE; IC₅₀s = 0.35 and 1 μM, respectively, for the human enzymes).¹ Pyridostigmine (10 μM) reduces decreases in AChE activity induced by the organophosphate pesticides diisopropyl fluorophosphate, chlorpyrifos-oxon, diazinon-oxon, paraoxon, and malaoxon in isolated bovine red blood cells.² It also reduces soman-induced membrane depolarization and decreases in AChE activity in isolated human muscle bundles in a concentration-dependent manner.³ Pyridostigmine (3 mg/kg per day for four weeks) prevents tachycardia and increases in sympathetic tone in mice following myocardial infarction induced by left coronary artery ligation.⁴ Formulations containing pyridostigmine have been used in the treatment of myasthenia gravis and as neuromuscular protective agents against organophosphate poisoning.

References

1. Strelnik, A.D., Petukhov, A.S., Zueva, I.V., *et al.* Novel potent pyridoxine-based inhibitors of AChE and BChE, structural analogs of pyridostigmine, with improved *in vivo* safety profile. *Bioorg. Med. Chem. Lett.* **26(16)**, 4092-4094 (2016).
2. Henderson, J.D., Glucksman, G., Leong, B., *et al.* Pyridostigmine bromide protection against acetylcholinesterase inhibition by pesticides. *J. Biochem. Mol. Toxicol.* **26(1)**, 31-34 (2012).
3. Maselli, R.A., Henderson, J.D., Ng, J., *et al.* Protection of human muscle acetylcholinesterase from soman by pyridostigmine bromide. *Muscle Nerve* **43(4)**, 591-595 (2011).
4. Durand, M.T., Becari, C., de Oliveira, M., *et al.* Pyridostigmine restores cardiac autonomic balance after small myocardial infarction in mice. *PLoS One* **9(8)**, e104476 (2014).

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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