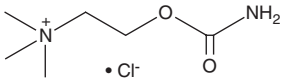
PRODUCT INFORMATION

Carbamoylcholine (chloride)

Item No. 14486

CAS Registry No.: 51-83-2
Formal Name: 2-[(aminocarbonyl)oxy]-N,N,N-trimethyl-ethanaminium, monochloride
Synonyms: Carbachol
MF: $C_6H_{15}N_2O_2 \bullet Cl$
FW: 182.7
Purity: ≥98%
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

Carbamoylcholine (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the carbamoylcholine (chloride) in the solvent of choice, which should be purged with an inert gas. Carbamoylcholine (chloride) is soluble in the organic solvent DMSO at a concentration of approximately 0.1 mg/ml mg/ml.

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 carbamoylcholine (chloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of carbamoylcholine (chloride) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Carbamoylcholine, also known as carbachol, is an analog of acetylcholine that activates acetylcholine receptors (AChR). Carbamoylcholine is an agonist of both nicotinic (nAChR) and muscarinic (mAChR) receptors, with reported K_i values ranging from 10 to 10,000 nM for different receptors and different preparations.[1-5] Carbamoylcholine (chloride) is used to study responses mediated by nAChR and mAChR, including smooth muscle contraction, gut motility, and neuronal signaling.[6-8]

References

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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