

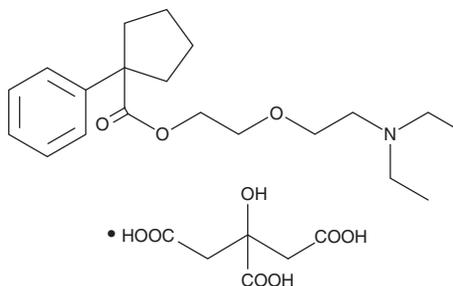
PRODUCT INFORMATION



Carbetapentane (citrate)

Item No. 18606

CAS Registry No.: 23142-01-0
Formal Name: 1-phenyl-cyclopentanecarboxylic acid
2-[2-(diethylamino)ethoxy]ethyl ester,
2-hydroxy-1,2,3-propanetricarboxylate
Synonym: Pentoxifyverine citrate
MF: C₂₀H₃₁NO₃ • C₆H₈O₇
FW: 525.6
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

Carbetapentane (citrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the carbetapentane (citrate) in the solvent of choice, which should be purged with an inert gas. Carbetapentane (citrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of carbetapentane (citrate) in ethanol is approximately 0.3 mg/ml and approximately 5 mg/ml in DMSO and DMF.

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

Description

Carbetapentane is a sigma-1 (σ_1) receptor agonist ($K_i = 10.4$ nM).¹ *In vivo*, carbetapentane (1-5 mg/kg) inhibits citric acid-induced cough in guinea pigs.² Carbetapentane (12.5 and 25 mg/kg; i.p.) reduces the number of seizures, mortality, and hippocampal neuronal cell death in a rat model of kainate-induced seizures.³

References

1. Ganapathy, M.E., Prasad, P.D., Huang, W., *et al.* Molecular and ligand-binding characterization of the σ -receptor in the Jurkat human T lymphocyte cell line. *J. Pharmacol. Exp. Ther.* **289**(1), 251-260 (1999).
2. Brown, C., Fezoui, M., Selig, W.M., *et al.* Antitussive activity of sigma-1 receptor agonists in the guinea-pig. *Br. J. Pharmacol.* **141**(2), 233-240 (2004).
3. Kim, H.-C., Jhoo, W.-K., Kim, W.-K., *et al.* Carbetapentane attenuates kainate-induced seizures via σ -1 receptor modulation. *Life Sci.* **69**(8), 915-922 (2001).

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, 11/04/2022

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