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## Product Data Sheet

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Product Name: Guvacoline (hydrobromide)

Cat. No.: GC15845

### Chemical Properties

Cas. No. 17210-51-4

Chemical Name 1,2,5,6-tetrahydro-3-pyridinecarboxylic acid, methyl ester, monohydrobromide

SMILES O=C(OC)C1=CCCNC1.Br

Formula  $C_7H_{11}NO_2 \cdot HBr$  M.Wt 222.1

Solubility  $\leq 1\text{mg/ml}$  in DMSO;  $1\text{mg/ml}$  in dimethyl formamide Storage Store at  $-20^\circ\text{C}$

General tips For obtaining a higher solubility, please warm the tube at  $37^\circ\text{C}$  and shake it in the ultrasonic bath for a while. Stock solution can be stored below  $-20^\circ\text{C}$  for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

Target: atrial and ileal muscarinic receptors

IC50: 2.1 mM for growth inhibition of human buccal epithelial cells

Guvacoline is a kind of natural alkaloid which is found in areca nuts that is related to the nootropic, arecoline. Guvacoline can function as a full agonist of atrial and ileal muscarinic receptors.

In Vitro: In human buccal epithelial cells, Guvacoline could significantly decrease the colony-formation efficiency in a dose dependent manner, with the IC50 value of 2.1 mM. Besides, Guvacoline could also dose-dependently reduce the amount of total free low-molecular-weight thiols (0.88 mM Guvacoline caused 25% decrease) and increase the number of single strand breaks [1].

In Vivo: No data available recently.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Clinical trial: No data available recently.

Reference:

[1] K. Sundqvist, Y. Liu, J. Nair, et al. Cytotoxic and genotoxic effects of areca nut-related compounds in cultured human buccal epithelial cells. *Cancer Research* 49(19), 5294-5298 (1989).

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