

## Arecoline hydrobromide

**Catalog No:** 14132, 14133

**Format:** 1 g, 250 mg

**Chemical Properties:**

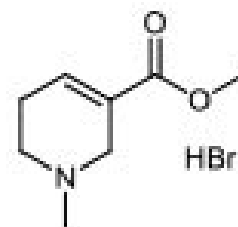
MW = 236.1

C<sub>8</sub>H<sub>13</sub>NO<sub>2</sub> • HBr

CAS 300-08-3

Physical Properties: White crystalline powder

**Names:** Arecoline hydrobromide, 1,2,5,6-tetrahydro-1-methyl-3-pyridinecarboxylic acid, methyl ester, hydrobromide



Chemical structure of Arecoline hydrobromide.

**Pharmacology:** Tyrosine 407 phosphorylation activates mitochondrial acetyl-CoA acetyltransferase 1 (ACAT1) by stabilizing its tetramer. This is believed to be the mechanisms by which ACAT1 is "hijacked" and contributes to the Warburg effect in cancer. Arecoline is a covalent inhibitor of ACAT1 which binds to and disrupts only ACAT1 tetramers (IC<sub>50</sub> = 11.1 μM). ACAT2 and DLAT are not inhibited. Treatment of xenograft nude mice with Arecoline resulted in a dose-dependent reduction in tumor mass (ref 1). Agonist at muscarinic acetylcholine receptors M1-M5 (EC<sub>50</sub> in the range of 7-410 nM) (ref 2). May be effective in dementia (ref 3).

**Solubilization:** May be dissolved in water (50 mg/ml)

**Fluorescent Properties:** N/A

**Quality Control:**

>98% (TLC); NMR (Conforms)

**References:**

1. J Fan *et al. Mol. Cell* 2016, 64:859
2. JN Heinrich *et al. Eur. J. Pharmacol.* 2009, 605:53
3. JE Christie *et al. Br. J. Psychiatry* 1981, 138:46

**Storage and Guarantee:** Store desiccated as supplied at room temperature for up to 2 years. Do not store solutions for longer than one day.

This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.