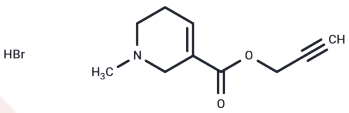
Data Sheet (Cat.No.T36241)

TargetMol

Arecaidine propargyl ester (hydrobromide)

Chemical Properties



CAS No. :	116511-28-5
Formula:	C10H14BrNO2
Molecular Weight:	260.13
Storage:	Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Arecaidine propargyl ester is an agonist of M2muscarinic acetylcholine receptors (mAChRs).1It selectively binds to M2over M1, M3, M4, and M5mAChRs in CHO cells expressing the human receptors (Kis = 0.0871, 1.23, 0.851, 0.977, and 0.933 μM, respectively). Arecaidine propargyl ester induces contractions in isolated guinea pig atrium (pD2= 8.67). It induces apoptosis and the production of reactive oxygen species (ROS) in U87 and U251 glioblastoma cells when used at a concentration of 100 μM. 2Arecaidine propargyl ester decreases mean arterial blood pressure in normotensive cats (ED25= 1.9 nmol/kg).3It is toxic to house flies (Musca) when administered at a dose of 75 μg/fly.4
Targets(IC50)	Apoptosis,Others

Solubility Information

Solubility	DMSO: 30 mg/mL (115.33 mM),Sonication is recommended. PBS (pH 7.2): 10 mg/mL (38.44 mM),Sonication is recommended. DMF: 30 mg/mL (115.33 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8442 mL	19.2212 mL	38.4423 mL
5 mM	0.7688 mL	3.8442 mL	7.6885 mL
10 mM	0.3844 mL	1.9221 mL	3.8442 mL
50 mM	0.0769 mL	0.3844 mL	0.7688 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Scapecchi, S., Matucci, R., Bellucci, C., et al.Highly chiral muscarinic ligands: the discovery of (2S,2'R,3'S,5'R)-1-methyl-2-(2-methyl-1,3-oxathiolan-5-yl)pyrrolidine 3-sulfoxide methyl iodide, a potent, functionally selective, M2 partial agonistJ. Med. Chem.49(6)1925-1931(2006)

Di Bari, M., Tombolillo, B., Conte, C., et al.Cytotoxic and genotoxic effects mediated by M2 muscarinic receptor activation in human glioblastoma cellsNeurochem. Int.90261-270(2015)

Porsius, A.J., and Van Zwieten, P.A.Central action of some cholinergic drugs (arecaidine esters) and nicotine on blood pressure and heart rate of catsProg. Brain Res.47131-135(1977)

Honda, H., Tomizawa, M., and Casida, J.E.Insect muscarinic acetylcholine receptor: Pharmacological and toxicological profiles of antagonists and agonistsJ. Agric. Food Chem.55(6)2276-2281(2007)

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