Data Sheet (Cat.No.T27624)

TargetMol

Iptakalim Hydrochloride

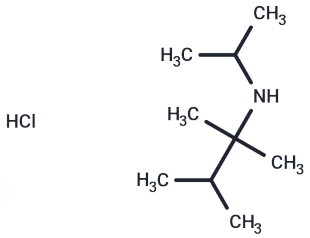
Chemical Properties

CAS No. : 642407-63-4

Formula: C9H22ClN

Molecular Weight: 179.731

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	Iptakalim, a lipophilic para-amino compound, is a novel ATP-sensitive potassium channel (KATP) opener, as well as an α4β2-containing nicotinic acetylcholine receptor (nAChR) antagonist. Iptakalim is also a K(ir) 6.1/SUR2B activator that can attenuate hypoxia-induced pulmonary arterial hypertension in rats by endothelial function protection.
Targets(IC50)	AChR,Potassium Channel

Solubility Information

Solubility	DMSO: 60 mg/mL (333.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.5639 mL	27.8195 mL	55.639 mL
5 mM	1.1128 mL	5.5639 mL	11.1278 mL
10 mM	0.5564 mL	2.782 mL	5.5639 mL
50 mM	0.1113 mL	0.5564 mL	1.1128 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

Mengyu He, et al. Iptakalim ameliorates hypoxia-impaired human endothelial colony-forming cells proliferation, migration, and angiogenesis via Akt/eNOS pathways. Pulm Circ. 2019 Oct 18;9(3):2045894019875417.
Zhou HM, Zhong ML, Wang RH, Long CL, Zhang YF, Cui WY, Wang H. Synergisms of cardiovascular effects between iptakalim and amlodipine, hydrochlorothiazide or propranolol in anesthetized rats. Zhongguo Ying Yong Sheng Li Xue Za Zhi. 2015 Nov;31(6):532-40. PubMed PMID: 27215021.
Wang SY, Cui WY, Wang H. The new antihypertensive drug iptakalim activates ATP-sensitive potassium channels in the endothelium of resistance blood vessels. Acta Pharmacol Sin. 2015 Dec;36(12):1444-50. doi: 10.1038/aps.2015.97. Epub 2015 Nov 23. PubMed PMID: 26592519; PubMed Central PMCID: PMC4816240.
Fan Y, Kong H, Ye X, Ding J, Hu G. ATP-sensitive potassium channels: uncovering novel targets for treating depression. Brain Struct Funct. 2016 Jul;221(6):3111-22. doi: 10.1007/s00429-015-1090-z. Epub 2015 Aug 20. PubMed PMID: 26289962.