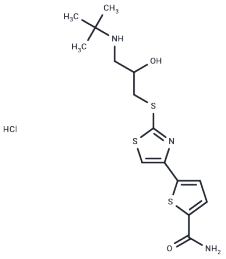
Data Sheet (Cat.No.T30140)

TargetMol

Arotinolol hydrochloride

Chemical Properties



CAS No. : 68377-91-3

Formula: C15H22ClN3O2S3

Molecular Weight: 408

Storage: Store under nitrogen
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	Arotinolol hydrochloride(Arotinolol HCl) is a non-selective α/β-adrenergic receptor blocker.Arotinolol hydrochloride inhibits the binding of the radioligand 125I-ICYP to the 5HT1B-hydroxytryptamine receptor. Arotinolol hydrochloride is an antihypertensive and anti-obesity agent that improves aortic stiffness in rats and is used to study obesity-related diseases.
Targets(IC50)	5-HT Receptor,Adrenergic Receptor
In vitro	Arotinolol HCl shows its potency for inhibiting the binding of the same radioligand to the 5HT1B-serotonergic receptor site, Arotinolol HCl displaces 125I-ICYP binding to 5HT1B-receptors with the pKi values of 7.97 and 8.16 respectively for β1 and β2 adrenergic receptors.[3] Arotinolol HCl shows its selectivity of β-adrenergic receptors, the result of Arotinolol HCl for β1 and β2 adrenoceptors in 125I-ICYP binding to rat cerebral cortical membranes with pKi value of 9.74 and 9.26 respectively. The selective of β1 and β2 is equal.[3]
In vivo	Arotinolol HCl (200 mg/kg; oral gavage; 8 weeks) can significantly decrease central arterial pressure (CAP) and pulse wave velocity (PWV), in addition, it reduces aortic collagen depositions and finally improves arterial stiffness in SHR mice.[3]

Solubility Information

Solubility	DMSO: 55 mg/mL (134.8 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.451 mL	12.2549 mL	24.5098 mL
5 mM	0.4902 mL	2.451 mL	4.902 mL
10 mM	0.2451 mL	1.2255 mL	2.451 mL
50 mM	0.049 mL	0.2451 mL	0.4902 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

Wang Z, et al. Magnetic solid-phase extraction based on magnetic multiwalled carbon nanotubes for the simultaneous enantiomeric analysis of five β-blockers in the environmental samples by chiral liquid chromatography coupled with tandem mass spectrometry. Talanta. 2018 Apr 1;180:98-107.
Qian Z, et al. High-throughput LC-MS/MS method with 96-well plate precipitation for the determination of arotinolol and amlodipine in a small volume of rat plasma: Application to a pharmacokinetic interaction study. J Sep Sci. 2018 Feb;41(3):618-629.
Zhou W, et al. Mechanisms of improved aortic stiffness by arotinolol in spontaneously hypertensive rats. PLoS One. 2014 Feb 12;9(2):e88722.
TSUCHIHASHI H, et al. Characteristics of 125I-lodocyanopindolol Binding to β-Adrenergic and Serotonin-1B Receptors of Rat Brain: Selectivity of β-Adrenergic Agents. The Japanese Journal of Pharmacology.1990, 52(2): 195-200.