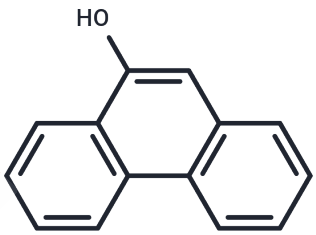
Data Sheet (Cat.No.T22537)

TargetMol

9-Phenanthrol

Chemical Properties



CAS No. : 484-17-3

Formula: C14H10O

Molecular Weight: 194.23

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	9-Phenanthrol is inhibitor of the transient receptor potential melastatin 4 (TRPM) channel, a Ca2+ -activated non-selective cation channel.
Targets(IC50)	TRP/TRPV Channel
In vitro	In addition, 9-phenanthrol, lacking the chemical groups necessary for CFTR activation, also reversibly inhibited TRPM4 with a similar IC(50). Channel inhibition was voltage independent. The IC(50) determined in the whole-cell and inside-out experiments were similar, suggesting a direct effect of the molecule. However, 9-phenanthrol was ineffective on TRPM5, the most closely related channel within the TRP protein family. We identify 9-phenanthrol as a TRPM4 inhibitor, without effects on TRPM5. It could be valuable in investigating the physiological functions of TRPM4, as distinct from those of TRPM5[1].

Solubility Information

Solubility	DMSO: 19 mg/mL (97.82 mM),Sonication is recommended. Ethanol: 9 mg/mL (46.34 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.1485 mL	25.7427 mL	51.4854 mL
5 mM	1.0297 mL	5.1485 mL	10.2971 mL
10 mM	0.5149 mL	2.5743 mL	5.1485 mL
50 mM	0.103 mL	0.5149 mL	1.0297 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

9-Phenanthrol inhibits human TRPM4 but not TRPM5 cationic channels[J]. British Journal of Pharmacology, 2010, 153(8):1697-1705.

Simard C , Laurent Sallé, René Rouet, et al. Transient receptor potential melastatin 4 inhibitor 9-phenanthrol abolishes arrhythmias induced by hypoxia and re-oxygenation in mouse ventricle.[J]. British Journal of Pharmacology, 2012, 165(7):2354-2364.