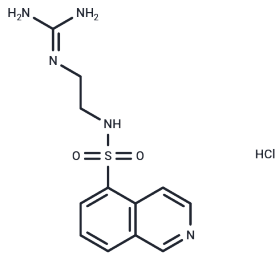
Data Sheet (Cat.No.T8681)

TargetMol

HA-1004 dihydrochloride

Chemical Properties



CAS No. : 92564-34-6

Formula: C12H16ClN5O2S

Molecular Weight: 329.81

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	HA-1004 dihydrochloride is an inhibitor of PKA, PKC, cGKI, MYLK, and calcium channel protein
Targets(IC50)	ERK,Calcium Channel,cGAS,PKA,PKC
In vivo	HA-1004, was shown to be a potent inhibitor of two cyclic nucleotide-dependent protein kinases, cyclic GMP-dependent protein kinase and cyclic AMP-dependent protein kinase and the Ki values were 1.4 and 2.3 microM, respectively.?HA-1004 relaxed rabbit aortic strips contracted by various agonists and with similar ED50 values.?Phenotolamine, propranolol and atropine did not affect this HA-1004-induced relaxation, thereby suggesting that this compound does not act through these membrane receptor associated mechanisms.?HA-1004 shifted the dose-response curve for CaCl2 to the right in a competitive manner in depolarized rabbit renal arterial strips.?This compound also relaxed the A-23187 and phenylephrine-induced contractions elicited in Ca++-free solution.?HA-1004 exerts its action at the intracellular or submembranal level.?This vasodilator has little effect on actomyosin adenosine triphosphatase and Ca++-calmodulin-dependent myosin light chain kinase.?Studies using its derivatives with various lengths of alkyl chain (C0-C6) indicated that the potencies of these compounds, as vasorelaxants, correlated well with their potential to inhibit cyclic nucleotide-dependent protein kinase.?HA-1004 should be a useful tool for investigating in smooth muscle, regulatory mechanism(s) by second messengers, cyclic AMP and cyclic GMP[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.032 mL	15.1602 mL	30.3205 mL
5 mM	0.6064 mL	3.032 mL	6.0641 mL
10 mM	0.3032 mL	1.516 mL	3.032 mL
50 mM	0.0606 mL	0.3032 mL	0.6064 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

Ishikawa T , Inagaki M , Watanabe M , et al. Relaxation of vascular smooth muscle by HA-1004, an inhibitor of cyclic nucleotide-dependent protein kinase[J]. Journal of Pharmacology and Experimental Therapeutics, 1985, 235 (2):495-499.

Maurice G H , Ruey T L , Chipkin S R . The isoquinoline sulfonamide inhibitors of protein phosphorylation, H-7, H-8, and HA-1004, also inhibit RNA synthesis: studies on responses of adipose tissue to growth hormone.[J]. Endocrinology, 1990(1):441.