Product Data Sheet

Product Name: HA-100 (hydrochloride)
Cat. No.: GC12461

Chemical Properties

Cas. No.	210297-47-5		
Chemical Name	5-(1-piperazinylsulfonyl)-isoquinoline, dihydrochloride		
SMILES	O=S(C1=C2C(C=NC=C2)=CC=C1)(N3CCNCC3)=O.Cl.Cl		
Formula	$C_{13}H_{15}N_3O_2S \cdot 2HCl$	M.Wt	350.3
Solubility	≥ 131.8mg/mL in Water	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	HA-100 (hydrochloride)		

Background

HA-100 is a dechlorinated analogue of 1-(8-chloro-5-isoquinolinesulfonyl)piperazine (HA-156). HA-100 is an inhibitor of protein kinases (PKs) including PKA, PKC, and PKG [1].

Protein kinases are enzymes that can phosphorylate other proteins. Phosphorylation of proteins usually results in a functional change of the target protein (substrate) by changing enzyme activity, cellular location, or association with other proteins. Protein kinases operate in a large number of distinct signaling pathways, especially those involved in signal transduction. Protein kinases have also existed in bacteria and plant [2].

HA-100 inhibited the activity of PKA, PKC, and PKG with the IC50 values of 8, 12, and 4 μM, respectively. It showed less activity in blocking the activity of myosin light chain kinase with the IC50 of 240 μM [1]. HA-100 markedly decreased the affinity for MLC-kinase. HA-100 did not inhibit myosin light chain phosphorylation in platelets exposed to collagen significantly [1].

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Reference:
[1] Hagiwara M, Inagaki M, Watanabe M, et al. Selective modulation of calcium-dependent myosin phosphorylation by novel protein kinase inhibitors, isoquinolinesulfonamide derivatives[J]. Molecular pharmacology, 1987, 32(1): 7-12.
[2] Krebs E G. Protein kinases[J]. Current topics in cellular regulation, 1972, 5: 99-133.

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