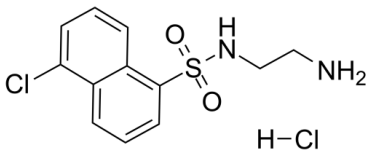
Data Sheet

Product Name:	A-3 (hydrochloride)
Cat. No.:	CS-0103566
CAS No.:	78957-85-4
Molecular Formula:	$C_{12}H_{14}Cl_2N_2O_2S$
Molecular Weight:	321.22
Target:	CaMK; Casein Kinase; PKA; PKC
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Neuronal Signaling; Protein Tyrosine Kinase/RTK; Stem Cell/Wnt; TGF-beta/Smad
Solubility:	DMSO : 125 mg/mL (389.14 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

A-3 hydrochloride is a potent, cell-permeable, reversible, ATP-competitive non-selective antagonist of various **kinases**. It against PKA ($\mathbf{K_i}$=4.3 μM), casein kinase II ($\mathbf{K_i}$=5.1 μM) and myosin light chain kinase (MLCK) ($\mathbf{K_i}$=7.4 μM). A-3 hydrochloride also inhibits PKC and casein kinase I with $\mathbf{K_i}$ values of 47 μM and 80 μM, respectively[1]. **In Vitro:** A-3 hydrochloride inhibits MLC-kinase competitively with respect to ATP and that the K_i value is 7.4 μM. A-3 is also a competitive inhibitor of cAMP-dependent protein kinase, cGMP-dependent protein kinase, protein kinase C, casein kinase I, and casein kinase II, with respect to ATP, exhibits K_i values of 4.3 μM, 3.8 μM, 47 μM, 80 μM, and 5.1 μM, respectively[1].

References:

[1]. Inagaki M, et al. Naphthalenesulfonamides as calmodulin antagonists and protein kinase inhibitors. Mol Pharmacol. 1986 Jun;29(6):577-81.

CAIndexNames:

1-Naphthalenesulfonamide, N-(2-aminoethyl)-5-chloro-, hydrochloride (1:1)

SMILES:

O=S(C1=C2C=CC=C(Cl)C2=CC=C1)(NCCN)=O.[H]Cl

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA