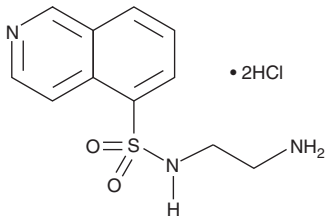
PRODUCT INFORMATION

H-9 (hydrochloride)

Item No. 13312

CAS Registry No.:	116700-36-8
Formal Name:	N-(2-aminoethyl)-5-isoquinolinesulfonamide, dihydrochloride
Synonym:	Protein Kinase Inhibitor H-9
MF:	$C_{11}H_{13}N_3O_2S \bullet 2HCl$
FW:	324.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 217 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

H-9 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the H-9 (hydrochloride) in an organic solvent of choice, which should be purged with an inert gas. H-9 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of H-9 (hydrochloride) in these solvents is approximately 10 and 1.5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of H-9 (hydrochloride) can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of H-9 (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The H series isoquinolinesulfonamide protein kinase inhibitors are widely used to block signaling pathways in order to elucidate mechanisms of cellular regulation and signal transduction. H-9, an isoquinolinesulfonamide protein kinase inhibitor, is a competitive inhibitor of PKC, PKG, and PKA with K_i values of 18, 0.87, and 1.9 µM, respectively.[1] H-9 has been used to reduce the cAMP-mediated excitatory response to serotonin in *C. elegan* enteric neurons and to inhibit PKA-mediated phosphorylation in a rat seizure model.[2,3]

References

1. Hidaka, H., Inagaki, M., Kawamoto, S., *et al.* Isoquinolinesulfonamides, novel and potent inhibitors of cyclic nucleotide dependent protein kinase and protein kinase C. *Biochemistry* **23(21)**, 5036-5041 (1984).
2. Papaioannou, S., Holden-Dye, L., and Walker, R.J. Evidence for a role for cyclic AMP in modulating the action of 5-HT and an excitatory neuropeptide, FLP17A, in the pharyngeal muscle of *Caenorhabditis elegans*. *Invert. Neurosci.* **8(2)**, 91-100 (2008).
3. Vázquez-López, A., Sierra-Paredes, G., and Sierra-Marcuño, G. Role of cAMP-dependent protein kinase on acute picrotoxin-induced seizures. *Neurochem. Res.* **30(5)**, 613-618 (2005).

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