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#9844 Store at -20C

H-89, Dihydrochloride

5.19 mg

For Research Use Only. Not for Use in Diagnostic Procedures.

Background

H-89 is a potent selective inhibitor of cAMP dependent protein kinase (PKA). The *in vitro* IC₅₀ of H-89 for PKA is approximately 50 nM and *in vivo* the inhibitory effect on PKA substrate phosphorylation and related cellular functions range from 10 μM to 30 μM (1,2). In addition to PKA, H-89 also exhibits a moderate inhibitory effect on PKG and PKCμ, with IC₅₀ in the 500 nM range (1,3). The inhibitory effect of H-89 is due to its competitive binding to the ATP pocket on the kinase catalytic subunit (4).

Molecular Formula

C₂₀H₂₀BrN₃O₂S • 2HCl

Molecular Weight

519.3 g/mol

Purity

>99%

CAS

127243-85-0

Solubility

Soluble in DMSO at 100mg/ml and EtOH at 2mg/ml.

Storage

Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

Directions for Use

H-89 is supplied as 5.19 mg powder. Store at or below -20°C. Before usage, dissolve powder in 0.5 ml DMSO to make 20 mM H-89. For working concentrations of 10 μM-20 μM, dilute DMSO stock 1:2000 to 1:1000. Treat cells with the desired concentration for 30 minutes.

Background References

1. Chijiwa, T. et al. (1990) *J Biol Chem* 265, 5267-72.
2. Meja, K.K. et al. (2004) *J Pharmacol Exp Ther* 309, 833-44.
3. Johannes, F.J. et al. (1995) *Eur J Biochem* 227, 303-7.
4. Engh, R.A. et al. (1996) *J Biol Chem* 271, 26157-64.

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