

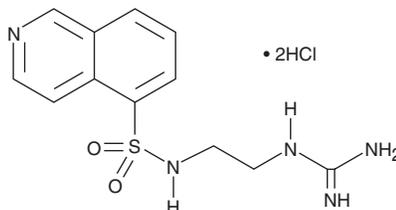
PRODUCT INFORMATION



HA-1004 (hydrochloride)

Item No. 10010558

CAS Registry No.: 92564-08-4
Formal Name: N-[2-[(aminoiminomethyl)amino]ethyl]-5-isoquinolinesulfonamide, dihydrochloride
MF: C₁₂H₁₅N₅O₂S • 2HCl
FW: 366.3
Purity: ≥98%
UV/Vis.: λ_{max}: 217, 274, 323 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

HA-1004 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the HA-1004 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. HA-1004 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of HA-1004 (hydrochloride) in these solvents is approximately 3 and 2 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 HA-1004 (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of HA-1004 (hydrochloride) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

HA-1004 is an inhibitor of protein kinase G (PKG) and PKA (K_s = 1.4 and 2.3 μM, respectively).¹ It also inhibits PKC and blocks intracellular calcium mobilization.^{2,3} HA-1004 induces relaxation of isolated rabbit aortic strips precontracted with histamine, serotonin (Item No. 14332), A23187 (Item No. 11016), angiotensin II (Item No. 17150), or prostaglandin F_{2α} (Item No. 16010; EC₅₀s = 0.32-0.63 μM), as well as phenylephrine (Item Nos. 18619 | 17205) with or without calcium (EC₅₀s = 2.3 and 0.5 μM, respectively). It also inhibits histamine-induced bronchoconstriction in guinea pigs without affecting blood pressure when administered intratracheally at a dose of 0.1 mg per animal.²

References

1. 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. Pharmacol. Exp. Ther.* **235**(2), 495-499 (1985).
2. Chapman, R.W., Tozzi, S., and Kreutner, W. Antibronchoconstrictor activity of the intracellular calcium antagonist HA 1004 in guinea pigs. *Pharmacology* **37**(3), 187-194 (1988).
3. De Sarro, G.B., Meldrum, B.S., and Nisticó, G. Anticonvulsant effects of some calcium entry blockers in DBA/2 mice. *Br. J. Pharmacol.* **93**(2), 247-256 (1988).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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