

Product Data Sheet

Product Name: EHNA hydrochloride

Cat. No.: GC10935

Chemical Properties

Cas. No. 58337-38-5

Chemical Name (2R,3S)-3-(6-amino-9H-purin-9-yl)nonan-2-ol hydrochloride

SMILES O[C@H](C)[C@H](CCCCC)N1C2=NC=NC(N)=C2N=C1.Cl

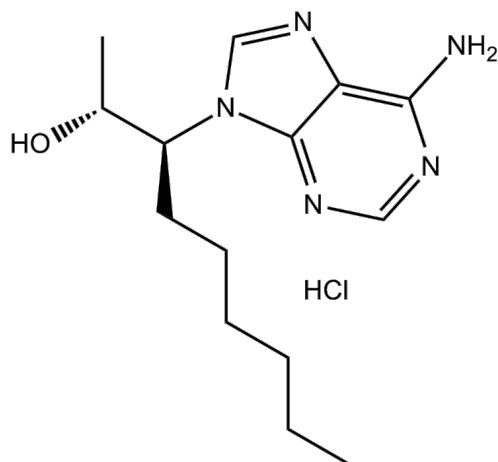
Formula $C_{14}H_{23}N_5O \cdot HCl$ M.Wt 313.83

Solubility 30mg/mL in DMSO, 30mg/mL in DMF, 20mg/mL in Ethanol, 10mg/mL in Water
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C 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



Background

EHNA is a reversible adenosine deaminase inhibitor ($IC_{50} = 1.2 \mu M$ in human red blood cells) that also selectively inhibits the cGMP-specific phosphodiesterase (PDE2) ($IC_{50}s = 0.8$ and $2 \mu M$ from human and porcine myocardium, respectively, $3.5 \mu M$ in rat hepatocyte, and $5.5 \mu M$ in human

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

platelet).[1],[2] Comparatively, EHNA is much less potent at inhibiting PDE1, PDE3, or PDE4 (IC₅₀s > 100 μ M).¹ EHNA has been used to evaluate cardioprotective and neuroprotective effects during ischemia, to study the role of cAMP/cGMP signaling, and to maintain pluripotency/prevent differentiation of human embryonic stem cells.[3],[4][5]

Reference

- [1]. Podzuweit, T., Nennstiel, P., and Müller, A. Isozyme selective inhibition of cGMP-stimulated cyclic nucleotide phosphodiesterases by erythro-9-(2-hydroxy-3-nonyl) adenine. *Cell. Signal.* 7(7), 733-738 (1995).[
- [2]. Michie, A.M., Lobban, M., Müller, T., et al. Rapid regulation of PDE-2 and PDE-4 cyclic AMP phosphodiesterase activity following ligation of the T cell antigen receptor on thymocytes: Analysis using the selective inhibitors erythro-9-(2-hydroxy-3-nonyl)-adenine (EHNA) and rolipram. *Cell. Signal.* 8(2), 97-110 (1996).
- [3]. Barankiewicz, J., Danks, A.M., Abushanab, E., et al. Regulation of adenosine concentration and cytoprotective effects of novel reversible adenosine deaminase inhibitors. *J. Pharmacol. Exp. Ther.* 283(3), 1230-1238 (1997).
- [4]. Dickinson, N.T., Jang, E.K., and Haslam, R.J. Activation of cGMP-stimulated phosphodiesterase by nitroprusside limits cAMP accumulation in human platelets: Effects on platelet aggregation. *Biochem. J.* 323(Pt. 2), 371-377 (1997).
- [5]. Burton, P., Adams, D.R., Abraham, A., et al. Erythro-9-(2-hydroxy-3-nonyl)adenine (EHNA) blocks differentiation and maintains the expression of pluripotency markers in human embryonic stem cells. *Biochem. J.* 432(3), 575-584 (2010).

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA