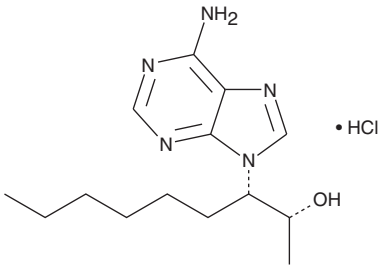
PRODUCT INFORMATION

EHNA (hydrochloride)

Item No. 13352

CAS Registry No.:	58337-38-5
Formal Name:	(αR,βS)-*rel*-6-amino-β-hexyl-α-methyl-9H-purine-9-ethanol, monohydrochloride
Synonyms:	NSC 263164, *erythro*-9-(2-Hydroxy-3-nonyl)adenine
MF:	$C_{14}H_{23}N_5O$ • HCl
FW:	313.8
Purity:	≥95%
UV/Vis.:	λ_{max}: 210, 261 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

EHNA (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the EHNA (hydrochloride) in the solvent of choice. EHNA (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of EHNA (hydrochloride) in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

EHNA (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, EHNA (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. EHNA (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. To obtain a higher aqueous concentration EHNA (hydrochloride) can be directly dissolved in water at a concentration of 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

EHNA is a reversible adenosine deaminase inhibitor (IC_{50} = 1.2 µM in human red blood cells) that also selectively inhibits the cGMP-specific phosphodiesterase (PDE2) (IC_{50}s = 0.8 and 2 µM from human and porcine myocardium, respectively, 3.5 µM in rat hepatocyte, and 5.5 µM in human platelet).[1,2] Comparatively, EHNA is much less potent at inhibiting PDE1, PDE3, or PDE4 (IC_{50}s > 100 µM).[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.[3-5]

References

1. Podzuweit, T., Nennstiel, P., and Müller, A. *Cell. Signal.* **7(7)**, 733-738 (1995).
2. Michie, A.M., Lobban, M., Müller, T., *et al. Cell. Signal.* **8(2)**, 97-110 (1996).
3. Barankiewicz, J., Danks, A.M., Abushanab, E., *et al. J. Pharmacol. Exp. Ther.* **283(3)**, 1230-1238 (1997).
4. Dickinson, N.T., Jang, E.K., and Haslam, R.J. *Biochem. J.* **323(Pt. 2)**, 371-377 (1997).
5. Burton, P., Adams, D.R., Abraham, A., *et al. Biochem. J.* **432(3)**, 1-22 (2010).

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