



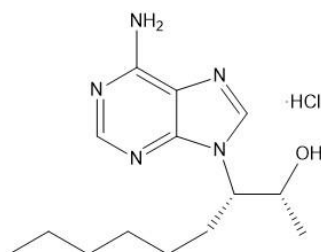
Catalog # 10-2438

EHNA HCl

CAS# 51350-19-7

Erythro-9-(2-hydroxy-3-nonyl)adenine, hydrochloride; NSC 263164

Lot # X102827



EHNA inhibits phosphodiesterase 2 (PDE2) (IC_{50} = 0.8 – 5.5 μ M in a variety of tissues and species) over PDE1, PDE3, or PDE4 (IC_{50} values > 100 μ M).^{1,2} It also inhibits adenosine deaminase (ADA), IC_{50} = 1.2 and 1.5 μ M in human RBCs and astrocytoma cells, respectively³, which may be responsible for its ability to induce apoptosis in malignant pleural mesothelioma cell lines⁴. Because it blocks breakdown of adenosine to inosine and hypoxanthine, EHNA prevents formation of free radical substrates, protecting against cardiac reperfusion-mediated injury.⁵ It inhibits differentiation and maintains expression of pluripotency markers in hESCs, but not through inhibition of PDEs or ADA.⁶

- 1) Podzuweit *et al.* (1995), *Isoenzyme selective inhibition of cGMP-stimulated cyclic nucleotide phosphodiesterases by erythron-9-(2-hydroxy-3-nonyl) adenine*; Cell Signal., **7** 733
- 2) Méry *et al.* (1995), *Erythro-9-(2-hydroxy-3-nonyl)adenine inhibits cyclic GMP-stimulated phosphodiesterase in isolated cardiac myocytes*; Mol. Pharmacol., **48** 121
- 3) Barankiewicz *et al.* (1997), *Regulation of adenosine concentration and cytoprotective effects of novel reversible adenosine deaminase inhibitors*; J. Pharmacol. Exp. Ther., **283** 1230
- 4) Nakajima *et al.* (2015), *Adenosine deaminase inhibitor EHNA exhibits a potent anticancer effect against malignant pleural mesothelioma*; Cell Physiol. Biochem., **35** 51
- 5) Abd-Elfattah and Wechsler (1994), *Separation between ischemic and reperfusion injury by site specific entrapment of endogenous adenosine and inosine using NBMPR and EHNA*; J. Card. Surg., **9** 387
- 6) Burton *et al.* (2010), *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** 575

PHYSICAL DATA

Molecular Weight:	313.83
Molecular Formula:	C ₁₄ H ₂₃ N ₅ O · HCl
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	Water (up to 25 mg/ml)
Physical Description:	Pale yellow or off-white solid
Storage and Stability:	Store as supplied desiccated at room temperature for up to 2 years from the date of purchase. Solutions in distilled water may be stored at -20°C for up to 3 months.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.

