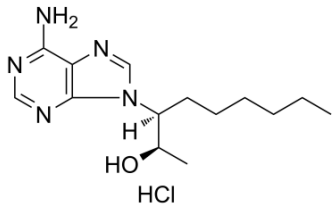
EHNA hydrochloride

Cat. No.:	HY-103160A
CAS No.:	58337-38-5
Molecular Formula:	$C_{14}H_{24}ClN_5O$
Molecular Weight:	313.83
Target:	Adenosine Deaminase; Phosphodiesterase (PDE); Influenza Virus
Pathway:	Metabolic Enzyme/Protease; Anti-infection
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



Relative stereochemistry

BIOLOGICAL ACTIVITY

Description	EHNA hydrochloride is a potent and selective dual inhibitor of **cyclic nucleotide phosphodiesterase 2 (PDE2)**(IC_{50}=4 μM) and **adenosine deaminase (ADA)**. EHNA hydrochloride exerts a concentration inhibition of the cGMP-stimulated PDE II (cGs-PDE)(**IC_{50}**:0.8 μM (human), 2 μM (porcine myocardium)), but has smaller inhibitory effect on the unstimulated PDE2 activity. EHNA hydrochloride play roles in mediating diverse pharmacological responses, including antiviral, antitumour and antiarrhythmic effects[1][2].
IC_{50} & Target	hPDE2A 0.8 μM (IC_{50})
In Vitro	EHNA completely ablates the ability of cyclic GMP to activate PDE2 activity, whilst having a much smaller inhibitory effect on the unstimulated PDE2 activity[2]. EHNA exhibits normal Michaelian kinetics of inhibition for the cyclic GMP-stimulated PDE2 activity with Hill plots near unity[2]. EHNA prevents dAdo degradation and increases mitochondrial dATP levels in fibroblasts[3].

REFERENCES

[1]. Podzuweit T, et al. Isozyme selective inhibition of cGMP-stimulated cyclic nucleotide phosphodiesterases by erythro-9-(2-hydroxy-3-nonyl) adenine.Cell Signal. 1995 Sep;7(7):733-8.

[2]. Michie AM, 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. 1996 Feb;8(2):97-110.

[3]. Blázquez-Bermejo C, et al. Increased dNTP pools rescue mtDNA depletion in human POLG-deficient fibroblasts. FASEB J. 2019 Jun;33(6):7168-7179.

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