2-Iminobiotin hydrobromide

Cat. No.: HY-118700A

CAS No.: 76985-52-9

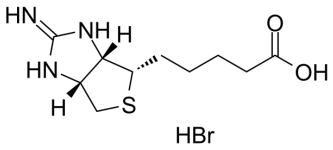
Molecular Formula: $C_{10}H_{18}BrN_3O_2S$

Molecular Weight: 324.24

Target: NO Synthase

Pathway: Immunology/Inflammation

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (385.52 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.0841 mL	15.4207 mL	30.8414 mL
	5 mM	0.6168 mL	3.0841 mL	6.1683 mL
	10 mM	0.3084 mL	1.5421 mL	3.0841 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (6.42 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.42 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

2-Iminobiotin hydrobromide (Guanidinobiotin hydrobromide) is a biotin (vitamin H or B7) analog. 2-Iminobiotin hydrobromide is a reversible nitric oxide synthases inhibitor with K_is of 21.8 and 37.5 μM for murine iNOS and rat n-cNOS, respectively[1]. 2-Iminobiotin hydrobromide superimposes on hypothermia protects human neuronal cells from hypoxia-induced cell damage[2].

IC_{50} & Target

NO synthases[1]

In Vitro

Application of low concentrations of 2-Iminobiotin (2-IB; 10 ng/mL and 30 ng/mL) superimposed on hypothermia abrogates the hypoxia-induced lactate dehydrogenase (LDH) increase, resulting in LDH levels that were not different from the

normoxia control[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Sup SJ, et al. 2-Iminobiotin is an inhibitor of nitric oxide synthases. Biochem Biophys Res Commun. 1994 Oct 28;204(2):962-8.

[2]. Zitta K, et al. 2-Iminobiotin Superimposed on Hypothermia Protects Human Neuronal Cells from Hypoxia-Induced Cell Damage: An in Vitro Study. Front Pharmacol. 2018 Jan 11;8:971.

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