Pyridoxylamine dihydrochloride

Cat. No.: HY-B1745A

CAS No.: 524-36-7

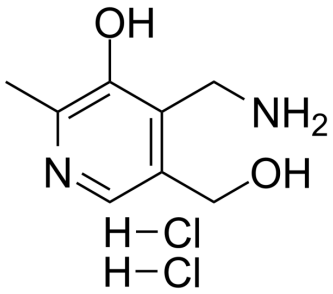
Molecular Formula: $C_8H_{14}Cl_2N_2O_2$

Molecular Weight: 241.11

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

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



SOLVENT & SOLUBILITY

In Vitro

H_2O : 120 mg/mL (497.70 mM; Need ultrasonic)
DMSO : 120 mg/mL (497.70 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.1475 mL	20.7374 mL	41.4748 mL
	5 mM	0.8295 mL	4.1475 mL	8.2950 mL
	10 mM	0.4147 mL	2.0737 mL	4.1475 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (414.75 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3 mg/mL (12.44 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3 mg/mL (12.44 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3 mg/mL (12.44 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pyridoxylamine dihydrochloride is an advanced glycation end production (AGEs) and lipoxidation end products (ALEs) inhibitor, to protect against diabetes-induced retinal vascular lesions[1].

In Vitro

Pyridoxylamine (PM), a member of the B_6 vitamer family, is a potent scavenger of reactive carbonyls, inhibiting the late stages of glycation reactions that lead to AGE formation[1].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Pyridoxylamine limits the formation of CML and CEL and cross-linking in skin collagen and, ultimately inhibits the development of nephropathy in STZ-diabetic rats. Pyridoxylamine does not appear to function as an antioxidant since it does not prevent lipid peroxidation reactions. At the same time, it does prevent protein modification by products of lipid peroxidation, including inhibiting formation of malondialdehyde and 4-hydroxynonenal adducts on protein in Zucker rats in vivo[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Int J Biol Sci. 2022 Jan 1;18(2):809-825.
- Molecules. 2023 Apr 11, 28(8), 3375.

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REFERENCES

[1]. Stitt A, et al. The AGE inhibitor pyridoxamine inhibits development of retinopathy in experimental diabetes. Diabetes. 2002 Sep;51(9):2826-32.

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