



LKT Laboratories, Inc.

Pyridoxine Hydrochloride

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Product Information

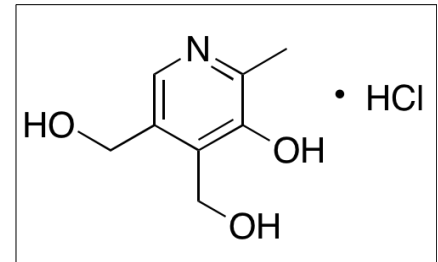
Product ID P9869
CAS No. 58-56-0
Chemical Name

Synonym

Formula $C_8H_{11}NO_3 \cdot HCl$
Formula Wt. 205.64
Melting Point 206-208 °C
Purity $\geq 98\%$
Solubility Soluble in water (200 mg/mL), ethanol (8.5 mg/mL).

Store Temp Ambient
Ship Temp Ambient

Description Pyridoxine is a derivative of vitamin B6. In a clinical setting, pyridoxine decreases photosensitivity in subjects with erythropoietic protoporphyria. Pyridoxine exhibits antioxidative activity, inhibiting oxidized LDL-induced generation of superoxide anions, decreases in PKC activity, and decreases in p-eNOS and NO levels. In platelets, pyridoxine increases NO levels and inhibits platelet aggregation, displaying some antithrombotic benefit as well. Pyridoxine increases expression of IGF-binding protein 3 (IGF-BP3) in breast cancer cells through a p53-mediated mechanism. In synaptosomes, this compound inhibits release of glutamate but suppressing cellular influx of Ca^{2+} and activity of PKC. In erythrocytes exposed to high concentrations of glucose, pyridoxine decreases lipid peroxidation and protein glycosylation and increases Na^{2+}/K^{+} ATPase activity.



Bulk quantities available upon request

Product ID	Size
P9869	25 g
P9869	100 g

References Xie L, Liu Z, Lu H, et al. Pyridoxine inhibits endothelial NOS uncoupling induced by oxidized low-density lipoprotein via the PKC α signaling pathway in human umbilical vein endothelial cells. *Br J Pharmacol.* 2012 Feb;165(3):754-64. PMID: 21797845.

Nakari M, Kanouchi H, Oka T. High dose of pyridoxine induces IGFBP-3 mRNA expression in MCF-7 cells and its induction is inhibited by the p53-specific inhibitor pifithrin- α . *J Nutr Sci Vitaminol (Tokyo).* 2011;57(4):280-4. PMID: 22041910.

Yang TT, Wang SJ. Pyridoxine inhibits depolarization-evoked glutamate release in nerve terminals from rat cerebral cortex: a possible neuroprotective mechanism? *J Pharmacol Exp Ther.* 2009 Oct;331(1):244-54. PMID: 19628631.

Wu Y, Liu Y, Han Y, et al. Pyridoxine increases nitric oxide biosynthesis in human platelets. *Int J Vitam Nutr Res.* 2009 Mar;79(2):95-103. PMID: 20108211.

Jain SK, Lim G. Pyridoxine and pyridoxamine inhibits superoxide radicals and prevents lipid peroxidation, protein glycosylation, and $(Na^{+} + K^{+})$ -ATPase activity reduction in high glucose-treated human erythrocytes. *Free Radic Biol Med.* 2001 Feb 1;30(3):232-7. PMID: 11165869.

Ross JB, Moss MA. Relief of the photosensitivity of erythropoietic protoporphyria by pyridoxine. *J Am Acad Dermatol.* 1990 Feb;22(2 Pt 2):340-2. PMID: 2303590.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.