

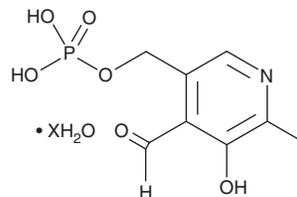
PRODUCT INFORMATION



Pyridoxal 5'-phosphate (hydrate)

Item No. 20352

CAS Registry No.: 853645-22-4
Formal Name: 3-hydroxy-2-methyl-5-[(phosphonoxy)methyl]-4-pyridinecarboxaldehyde, hydrate
MF: C₈H₁₀NO₆P • XH₂O
FW: 265.2
Purity: ≥95%
UV/Vis.: λ_{max}: 295, 388 nm
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pyridoxal 5'-phosphate (hydrate) is supplied as a crystalline solid. Aqueous solutions of pyridoxal 5'-phosphate (hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of pyridoxal 5'-phosphate (hydrate) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Pyridoxal 5'-phosphate, the active form of vitamin B₆, is a cofactor for many different enzymes involved in transamination reactions, including mitochondrial cysteine desulfurase, cystathionine γ-synthase, various aminotransferases, and D-serine dehydratase. It has been used to study the pyridoxal 5'-phosphate-dependent active sites of these enzymes.¹⁻⁴

References

1. Zhu, W., Lin, A., and Banerjee, R. Kinetic properties of polymorphic variants and pathogenic mutants in human cystathionine γ-lyase. *Biochemistry* **47(23)**, 6226-6232 (2008).
2. Steegborn, C., Clausen, T., Sonderrmann, P., *et al.* Kinetics and inhibition of recombinant human cystathionine γ-lyase. Toward the rational control of transsulfuration. *J. Biol. Chem.* **274(18)**, 12675-12684 (1999).
3. Goto, M., Miyahara, I., Hayashi, H., *et al.* Crystal structures of branched-chain amino acid aminotransferase complexed with glutamate and glutarate: True reaction intermediate and double substrate recognition of the enzyme. *Biochem.* **42(13)**, 3725-3733 (2003).
4. Brosnan, J.T. and Brosnan, M.E. Branched-chain amino acids: Enzyme and substrate regulation. *J. Nutr.* **136(1)**, 207S-211S (2006).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/02/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM