

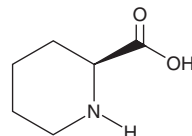
PRODUCT INFORMATION



L-Pipecolic Acid

Item No. 36313

CAS Registry No.: 3105-95-1
Formal Name: 2S-piperidinecarboxylic acid
Synonyms: (S)-Piperidine-2-Carboxylic Acid,
L-Homoproline, NSC 93089
MF: C₆H₁₁NO₂
FW: 129.2
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

L-Pipecolic acid is supplied as a solid. A stock solution may be made by dissolving the L-pipecolic acid in water. We do not recommend storing the aqueous solution for more than one day.

Description

L-Pipecolic acid is a metabolite of the amino acid L-lysine.¹ L-Pipecolic acid is oxidized to L- α -aminoadipic acid by α -aminoadipic semialdehyde dehydrogenase (α -AASA dehydrogenase) and peroxisomal sarcosine oxidase (PSO).^{4,5} L-Pipecolic acid inhibits GABA binding in bovine brain homogenate in the presence, but not absence, of hexobarbital or pentobarbital (IC_{50} s = 0.2 and 2 nM, respectively).² Serum levels of L-pipecolic acid are elevated in patients with Zellweger syndrome, a peroxisomal condition characterized by hepatomegaly, abnormal facial features, and cognitive impairments.³

References

1. Chang, Y.F. Pipecolic acid pathway: The major lysine metabolic route in the rat brain. *Biochem. Biophys. Res. Commun.* **69(1)**, 174-180 (1976).
2. Feigenbaum, P. and Chang, Y.F. Pipecolic acid antagonizes barbiturate-enhanced GABA binding to bovine brain membranes. *Brain Res.* **372(1)**, 176-179 (1986).
3. Mihalik, S.J., Moser, H.W., Watkins, P.A., et al. Peroxisomal L-pipecolic acid oxidation is deficient in liver from Zellweger syndrome patients. *Pediatr. Res.* **25(5)**, 548-552 (1989).
4. Chang, Y.F., Ghosh, P., and Rao, V.V. L-pipecolic acid metabolism in human liver: L- α -aminoadipate δ -semialdehyde oxidoreductase. *Biochim. Biophys. Acta* **1038(3)**, 300-305 (1990).
5. Dodt, G., Kim, D.G., Reimann, S.A., et al. L-Pipecolic acid oxidase, a human enzyme essential for the degradation of L-pipecolic acid, is most similar to the monomeric sarcosine oxidases. *Biochem. J.* **345 Pt. 3(Pt. 3)**, 487-494 (2000).

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

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