

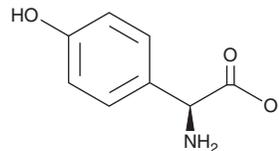
PRODUCT INFORMATION



Oxfenicine

Item No. 33698

CAS Registry No.: 32462-30-9
Formal Name: αS-amino-4-hydroxy-benzeneacetic acid
Synonyms: 4-hydroxy-L-Phenylglycine, *p*-hydroxy-L-Phenylglycine, UK 25842
MF: C₈H₉NO₃
FW: 167.2
Purity: ≥95%
UV/Vis.: λ_{max}: 227 nm
Supplied as: A crystalline 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

Oxfenicine is supplied as a crystalline solid. A stock solution may be made by dissolving the oxfenicine in the solvent of choice, which should be purged with an inert gas. Oxfenicine is slightly soluble in DMSO.

Aqueous solutions of oxfenicine can be prepared by directly dissolving the crystalline solid in aqueous buffers. Oxfenicine is slightly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Oxfenicine is an inhibitor of carnitine palmitoyltransferase 1 (CPT1) and a prodrug form of 4-hydroxyphenylglyoxylic acid.^{1,2} Oxfenicine is transaminated to 4-hydroxyphenylglyoxylic acid by branched-chain amino acid aminotransferase in rat heart homogenates.³ It inhibits fatty acid oxidation and increases carbohydrate oxidation in isolated rat hearts perfused with palmitate (Item No. 10010279), glucose, and insulin.⁴ Oxfenicine increases the *ex vivo* activity of cardiac pyruvate dehydrogenase (PDH) in rats with an ED₅₀ value of 0.3 mmol/kg.¹ It reduces increases in plasma levels of lactate and lactate dehydrogenase 1 (LDH-1), markers of ischemic injury, in a dog model of microsphere-induced coronary ischemia when administered at a dose of 0.1 mmol/kg.⁵

References

1. Barnish, I.T., Cross, P.E., Danilewicz, J.C., *et al.* Promotion of carbohydrate oxidation in the heart by some phenylglyoxylic acids. *J. Med. Chem.* **24(4)**, 399-404 (1981).
2. Bielefeld, D.R., Vary, T.C., and Neely, J.R. Inhibition of carnitine palmitoyl-CoA transferase activity and fatty acid oxidation by lactate and oxfenicine in cardiac muscle. *J. Mol. Cell. Cardiol.* **17(6)**, 619-625 (1985).
3. Stephens, T.W., Higgins, A.J., Cook, G.A., *et al.* Two mechanisms produce tissue-specific inhibition of fatty acid oxidation by oxfenicine. *Biochem. J.* **227(2)**, 651-660 (1985).
4. Higgins, A.J., Morville, M., Burges, R.A., *et al.* Oxfenicine diverts rat muscle metabolism from fatty acid to carbohydrate oxidation and protects the ischaemic rat heart. *Life Sci.* **27(11)**, 963-970 (1980).
5. Burges, R.A., Gardiner, D.G., and Higgins, A.J. Protection of the ischaemic dog heart by oxfenicine. *Life Sci.* **29(18)**, 1847-1853 (1981).

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.

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