

Product Information

L-Amino Acid Oxidase from *Crotalus adamanteus*

Type I, dried venom

Catalog Number **A9253**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN 9000-89-9

EC 1.4.3.2

Synonyms: LAAO, LAO

Product Description

L-Amino Acid Oxidase (LAAO) catalyzes the oxidative deamination of L-amino acids to their corresponding α -keto acids.¹⁻³ LAAO from *Crotalus adamanteus* is a flavoprotein enzyme with an estimated molecular mass of ~ 130 kDa.⁴ LAAO contains two different subunits of ~ 70 kDa molecular mass, with two FAD molecules per molecule of holoenzyme. LAAO is found in microorganisms, in many snake venoms, and in animal tissue, such as in kidney and liver.^{1,3}

LAAO is also a glycoprotein and contains about 2-5% carbohydrate, including sialic acid.⁵ Electrophoresis has indicated the presence of at least three isozymes, and perhaps as many as 20.^{4,6-8} The optimal pH of LAAO has been reported to be ~ 7.5 .¹ The reaction mechanism of LAAO from *Crotalus adamanteus* has been studied.^{2,8} Protocols for purification of LAAO from venom have been reported.^{1,7}

Preparation Instructions

This product can be dissolved at 1 mg/mL in water. Stock solutions may be refrigerated ($0-4\text{ }^{\circ}\text{C}$). Substrate and absence of oxygen protect activity at elevated temperatures. The enzyme may be reversibly inactivated by incubation in phosphate buffer pH 7.5 at $38\text{ }^{\circ}\text{C}$.⁴ Freezing the aqueous solution results in loss of activity, which may be reversible.^{9,10} One assay method uses Trizma®-HCl buffer, pH 7.5, at $37\text{ }^{\circ}\text{C}$, with L-phenylalanine as substrate, with catalase to prevent the α -keto acid from being destroyed by H_2O_2 .⁵

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

This product is sold as a crude venom powder. It should be stored dry and frozen.

References

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GCY,FEB,MAM 09/19-1