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Product Information

L-Amino Acid Oxidase from *Crotalus adamanteus*
Type IV, aqueous solution

Catalog Number **A9378**
Storage Temperature 2–8 °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]

This product has been purified following the protocol of Wellner and Meister, to the point just prior to crystallization.[1]

Preparation Instructions

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 °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 °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 an aqueous solution with a preservative. This product should **never** be frozen.

References

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