

Cat# SOX-01

Sarcosine oxidase (E. coli)

Size: 10 KU

General Information

Sarcosine oxidase is an enzyme (EC 1.5.3.1; Corynebacterium SoxA, 967 aa; SoxB is 405 aa protein, accession # P40875;) that catalyzes the oxidative demethylation of sarcosine to yield glycine, H₂O₂, 5,10-CH₂-tetrahydrofolate in a reaction requiring H₄-tetrahydrofolate and oxygen. Corynebacterial sarcosine oxidase is a heterotetramer (alpha 100 kDa, beta 42 kDa, gamma 20 kDa, and delta 6 kDa) and is produced as an inducible enzyme when Corynebacterium sp.is grown with sarcosine as source of carbon and energy.

Reaction catalysed

Sarcosine + H(2)O + O(2) <=> glycine + formaldehyde + H(2)O(2)

Cofactor(s)

FAD.

Comment(s)

The flavin is both covalently and non-covalently bound in a molar ratio of 1:1.

Source:

Sarcosine oxidase is obtained from E. Coli using proprietary methods. It is supplied in powder form with no additives or preservatives. The product is supplied on enzyme activity (KU; The amount of enzyme which produces 1 umol of formaldehyde per min at 37oC and pH 7.7.

The final enzyme preparation contains minimal amounts of the relevant contaminants (<0.5% of catalase and <0.00001%) glucose oxidase). The activity is >20 U/mg material.

Storage and Usage

Store powder at -20oC or below under dry conditions. Allow the product to reach room temp before opening the vial and dissolve in appropriate buffers for usage. Before returning to storage, re-dessicate under vacuum over silica gel for a minimum of 4 hours to provide best conditions for long term preservation of enzyme activity.

References

Chlumsky LJ (1995) JBC 270, 18252-18259

SOX-01

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