Creative Enzymes®

Sarcosine Oxidase from E. coli, Recombinant

Cat. No. DIA-414

Lot. No. (See product label)

Introduction

Description	Sarcosine oxidase (SAO) is an enzyme that catalyzes the oxidative demethylation of sarcosine to yield glycine, H2O2, 5, 10-CH2-tetrahydrofolate in a reaction requiring H4-tetrahydrofolate and oxygen. sarcosine + H2O + O2 = glycine + formaldehyde + H2O2.
Synonyms	Sarcosine Oxidase; EC 1.5.3.1; SAO

Product Information

Species	E. coli
Source	E. coli
Appearance	Yellow lyophilizate
EC Number	EC 1.5.3.1
CAS No.	9029-22-5
Molecular Weight	ca. 49 kDa
Activity	> 15 U/mg lyophilizate
Contaminants	catalase < 0.5% glucose oxidase < 1.0 x 10^-5%
Isoelectric point	5.3
pH Stability	6.5–10.5
Optimum pH	6.7–9.5
Thermal stability	below 55°C
Optimum temperature	50°C
Michaelis Constant	4.7 x 10^-3 M (sarcosine)
Structure	monomer of 43 kDa (SDS-PAGE) one mole of FAD per mole of enzyme
Inhibitors	Zn2+, Cu2+, Hg2+, Ag+
Stabilizers	Sucrose
Unit Definition	One unit (U) is defined as the amount of enzyme which produces 1 µmol of hydrogen peroxide per min at 37°C and pH 7.7.

Storage and Shipping Information

Storage	at -20°C
Stability	Stability (liquid form) stable at 37°C for at least two weeks Stability (powder form) stable at 30°C for at least one month