

## Native Microorganism Sarcosine Oxidase

Cat. No. DIA-171

Lot. No. (See product label)

### Introduction

**Description** Sarcosine oxidase (SAO) is an enzyme that catalyzes the oxidative demethylation of sarcosine to yield glycine, H<sub>2</sub>O<sub>2</sub>, 5, 10-CH<sub>2</sub>-tetrahydrofolate in a reaction requiring H<sub>4</sub>-tetrahydrofolate and oxygen.  
sarcosine + H<sub>2</sub>O + O<sub>2</sub> = glycine + formaldehyde + H<sub>2</sub>O<sub>2</sub>.

**Applications** This enzyme is useful for enzymatic determination of creatinine, creatine, and sarcosine when coupling with creatinine amidohydrolase and creatine amidinohydrolase.-341 is newer type of sarosine oxidase, with improved stability in antimicrobial reagent.

**Synonyms** Sarcosine Oxidase; EC 1.5.3.1; SAO

### Product Information

**Source** Microorganism

**Appearance** Yellowish amorphous powder, lyophilized

**Form** Freeze dried powder

**EC Number** EC 1.5.3.1

**CAS No.** 9029-22-5

**Molecular Weight** approx. 65 kDa (by gel filtration)

**Activity** Gradelll 8.0U/mg-solid or more

**Contaminants** Catalase < 1.0%

**Isoelectric point** 4.9±0.1

**pH Stability** pH 6.5-9.0 (25°C, 24hr)

**Optimum pH** 7.0-8.5

**Thermal stability** below 55°C (pH 7.5, 10min)

**Optimum temperature** 40-50°C

**Michaelis Constant** 2.8×10<sup>-3</sup>M (Sarcosine)

**Inhibitors** Cu<sup>++</sup>, Ag<sup>+</sup>, Hg<sup>++</sup>, p-chloromercuribenzoate, N-ethylmaleimide, SDS

**Stabilizers** Potassium gluconate

**Function** Amine oxidase activity; oxidoreductase activity; calcium ion binding; copper ion binding; quinone binding.

## ***Storage and Shipping Information***

**Stability**      Stable at -20°C for at least one year