

## Sarcosine Oxidase from E. coli, Recombinant

### Product Information

<b>Cat#</b>	DIA-414
<b>Abbr</b>	SAO, Recombinant (E. coli)
<b>Alias</b>	SAO
<b>Similar</b>	SAO
<b>Species</b>	E. coli
<b>Source</b>	E. coli
<b>Description</b>	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> .
<b>Appearance</b>	Yellow lyophilizate
<b>Enzyme Commission Number</b>	EC 1.5.3.1
<b>Activity</b>	> 10 U/mg
<b>Contaminants</b>	catalase < 0.5% glucose oxidase < 1.0 x 10 <sup>-5</sup> %
<b>Molecular Weight</b>	ca. 49 kDa
<b>Isoelectric point</b>	5.3
<b>pH Stability</b>	6.5–10.5
<b>Michaelis Constant</b>	4.7 x 10 <sup>-3</sup> M (sarcosine)
<b>Structure</b>	monomer of 43 kDa (SDS-PAGE) one mole of FAD per mole of enzyme
<b>Unit Definition</b>	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.
<b>Optimum pH</b>	6.7–9.5



**Creative Enzymes**

*Diagnostic Enzymes*

## Sarcosine Oxidase from *E. coli*, Recombinant

<b>Optimum temperature</b>	50°C
<b>Thermal stability</b>	below 55°C
<b>Stability</b>	Stability (liquid form) stable at 37°C for at least two weeks Stability (powder form) stable at 30°C for at least one month
<b>Storage</b>	at -20°C
<b>Stabilizers</b>	Sucrose
<b>Inhibitors</b>	Zn <sup>2+</sup> , Cu <sup>2+</sup> , Hg <sup>2+</sup> , Ag <sup>+</sup>
<b>Synonyms</b>	Sarcosine Oxidase; EC 1.5.3.1; SAO