



**Creative Enzymes**

*Diagnostic Enzymes*

## Cu/Zn Superoxide Dismutase, Recombinant

### Product Information

<b>Cat#</b>	NATE-1143
<b>Abbr</b>	Cu/Zn SOD, Recombinant
<b>Alias</b>	SOD
<b>Similar</b>	SOD
<b>Description</b>	<p>Superoxide dismutase (SOD) catalyzes the dismutation of superoxide radicals to hydrogen peroxide and molecular oxygen. SOD plays a critical role in the defense of cells against the toxic effects of oxygen radicals. SOD competes with nitric oxide (NO) for superoxide anion (which reacts with NO to form peroxynitrite), thereby SOD promotes the activity of NO. SOD has also been shown to suppress apoptosis in cultured rat ovarian follicles, neural cell lines, and transgenic mice by preventing the conversion of NO to peroxynitrate, an inducer of apoptosis.</p>
<b>Applications</b>	<p>SOD is a unique enzyme which can eliminate superoxide radical, thus protecting the cell from superoxide toxicity. SOD is widely used for adjusting endocrine system and immunity enhancement, in clinical and research of inflammation, such as therapy rheumatoid arthritis, Multiple chronic arthritis, myocardial infarction, angiocardopathy, cancer patients.</p>
<b>Appearance</b>	White powder, lyophilized
<b>Product Overview</b>	<p>Superoxide Dismutase (SOD , EC 1.15.1.1) deal with the superoxide radical by alternately adding or removing an electron from the superoxide molecules it encounters. Based on the metal ion cofactor identified in their active site, three types of SODs (Cu/Zn-SOD, Fe-SOD, Mn-SOD and Ni-SOD) are reported. Among these, Cu/Zn-SOD is the most prominent form, and mainly presented in cytosol, The animal-free Cu/Zn-SOD with higher purity and activity is expressed by E. coli.</p>
<b>Form</b>	Freeze dried powder
<b>Enzyme Commission</b>	EC 1.15.1.1

Tel: 1-631-562-8517 1-516-512-3133

Email: [info@creative-enzymes.com](mailto:info@creative-enzymes.com)

Fax: 1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA



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### Number

**Activity** 21,186U/mg protein

**Molecular Weight** About 20kDa (SDS-PAGE detection)

**Purity** >90% (SDS-PAGE test)

**Unit Definition** pH 8.2, 54 mM Tris-HCl 140 uL, including 54 mM Dimethyl swollen acid sodium, 1.07 mM diethylenetriamine pentaacetic acid, 5 uLddH<sub>2</sub>O or (5uL pyrogalllic acid in 10 mM HCl); total reaction volume is 150 uL, time keeping. The autoxidation rate is effective within 3 minutes, controlling the quantity of pyrogalllic acid, keeping the autoxidation rate will produce aincrease per min by 0.018 at 420 nm min , and produce a increase per min by 0.010 after SOD adding.

**Storage** 4°C, store at -20°C for long-term preservation.

**Buffer** 50mM Tris buffer, pH8.0

**Synonyms** Superoxide dismutases; EC 1.15.1.1; superoxidase dismutase; copper-zinc superoxide dismutase; Cu-Zn superoxide dismutase; ferrisuperoxide dismutase; superoxide dismutase I; superoxide dismutase II; SOD; Cu,Zn-SOD; Mn-SOD; Fe-SOD; SODF; SODS; SOD-1; SOD-2; SOD-3; SOD-4; hemocuprein; erythrocuprein; cytocuprein; cuprein ; hepatocuprein; 9054-89-1