Creative Enzymes
Diagnostic Enzymes

Mn-Superoxide Dismutase, Recombinant

Product Information

Cat#	NATE-1142
Abbr	Mn-SOD, Recombinant
Alias	SOD
Similar	SOD
Description	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.
Applications	SOD is a unique enzyme which caneliminate 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, angiocardiopathy, cancer patients.
Appearance	White powder, lyophilized
Product Overview	Superoxide Dismutase (SOD，EC 1.15.1.1) deals with the superoxide radical by alternately adding or removing an electron from the superoxide molecules it encounters. Based on the metalion cofactor identified in their active site, four types of SODs (Cu/Zn-SOD, Fe-SOD, Mn-SOD and Ni- SOD) are reported. Mn-SOD is presented in the mitochondria of eukaryotic cells and prokaryotic cells. The animal-free Mn-SOD with higher purity and activity is expressed by E. coli.
Form	Freeze dried powder
Enzyme Commission	EC 1.15.1.1

Tel: 1-631-562-8517 1-516-512-3133
Email:info@creative-enzymes.com
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Creative Enzymes
Diagnostic Enzymes

Mn-Superoxide Dismutase, Recombinant

Number	
Activity	15,528U/mg protein
Molecular Weight	About 26kDa (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 uLddH2O or (5uL pyrogallic 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 pyrogallic 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	100mM phosphate buffer，pH7.4
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

Tel: 1-631-562-8517 1-516-512-3133
Email:info@creative-enzymes.com
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA