

## Mn-Superoxide Dismutase, Recombinant

Cat. No. NATE-1142

Lot. No. (See product label)

### Introduction

#### 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 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.

#### 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

### Product Information

#### Appearance

White powder, lyophilized

#### EC Number

EC 1.15.1.1

#### CAS No.

9054-89-1

#### Molecular Weight

About 26kDa (SDS-PAGE detection)

#### Purity

>90% (SDS-PAGE test)

#### Activity

10,000 U/mg solid, 2,500 U/mg protein

#### Buffer

100mM phosphate buffer, pH7.4

#### 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 an increase per min by 0.018 at 420 nm min, and produce a increase per min by 0.010 after SOD adding.

### Storage and Shipping Information

#### Storage

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