

# Technical Data Sheet



## Human Copper, Zinc-Superoxide Dismutase (rh-Cu, Zn-SOD)

### General Information

**Other Name:** Superoxide dismutase 1 (SOD1)

**Catalog Number:** A01S

**Formulation:** Lyophilized from sterile water

**Mol. Wt.:** 17 kDa

**N-terminus Sequenced:**  
ATKAVCVLKG

**Resources:** *Escherichia coli* (*E. coli*)

**Purity:** ≥95% by SDS-PAGE analysis

**Endotoxin :** <1.0 EU/μg protein

**Metals:** Cadmium<0.5ppm;  
Mercury<0.5ppm; Lead<6.5ppm  
(1ppm=1μg metal/g Protein)

### Specific activity:

≥10,000 IU/mg protein (Determined by NUPTEC according to modified Marklund assay at 35°C )

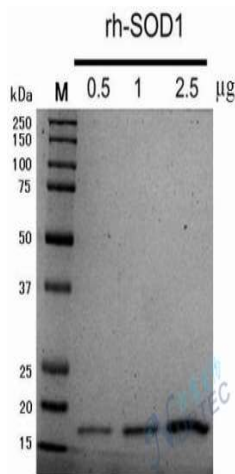
≥10,380 IU/mg protein (Determined by SGS.

*Product is stable for up to three years from date of receipt at -20°C to -80°C.*

*It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.*

### Description

Superoxide dismutase (SOD) is a category of metalloenzyme, extensively existing in all living organisms (e.g. animals, plants, microorganisms, etc.). Based on its metallicity, SOD is categorized into copper, zinc-SOD (Cu, Zn-SOD), manganese-SOD (Mn-SOD) and iron-SOD (Fe-SOD). SOD has a physiological significance that can convert toxic superoxide free radicals into hydrogen peroxide, it's the primary substance to scavenge oxygen free radicals in living organisms. It has been demonstrated that there are up to 60 diseases directly related to oxygen free radicals and SOD level has been known as an illustrated indicator for aging and death. SOD can prohibit superoxide free radicals-induced damage at cellular level and locally repair damaged cells. It plays more and more important role in anti-oxidation in living organisms. SOD is one of components in cosmetic products because it can delay aging, regulate immune response and blood lipid level, and prevent radiation.



### Notes:

It is recommended that the product is reconstituted with sterile water into a final concentration of 1 mg/ml (10 KU/ml). Store the reconstituted product in aliquots at -20°C in dark place. Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes.

The use of strong acids and alkalis, strong oxidants, and high concentrations of organic solvents should be avoided to protect the product from denaturation. Please contact us for any concerns or special requirements.

**Research use only or for further manufacturing**