## **PRODUCT INFORMATION**

**Expression system** E.coli

**Domain** 1-154aa

**UniProt No.** P00441

NCBI Accession No. NP\_000445.1

#### **Alternative Names**

Superoxide dismutase 1 soluble, ALS, SOD, ALS1, IPOA, Cu-Zn superoxide dismutase, Superoxide dismutase 1 soluble, SOD1, Superoxide dismutase 1, soluble ALS 1, Amyotrophic lateral sclerosis 1 Amyotrophic lateral sclerosis 1 adult, Cu/Zn SOD, Cu/Zn superoxide dismutase, Homodimer, Indophenoloxidase A, Mn superoxide dismutase, SOD 1, SOD soluble, SOD2, SODC, Superoxide dismutase 1 soluble, Superoxide dismutase Cu Zn, Superoxide dismutase cystolic,

# **PRODUCT SPECIFICATION**

#### **Molecular Weight**

15.9 kDa (154aa) confirmed by MALDI-TOF

Concentration

1mg/ml (determined by Bradford assay)

#### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 7.5) containing 10% glycerol

Purity

> 95% by SDS-PAGE

#### **Endotoxin level**

< 1 EU per 1ug of protein (determined by LAL method)

### **Biological Activity**

Specific activity is > 500unit/mg, in which one unit will inhibit the rate of reduction of cytochrome c by 50% in a coupled system, using xanthine and Xanthine oxidase at pH 7.5 at 25C.

#### Tag

Non-Tagged

**Application** SDS-PAGE, Enzyme Activity

#### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.



## BACKGROUND

#### Description

Superoxide dismutase 1 (SOD1) binds copper and zinc ions and is one of three isozymes responsible for destroying free superoxide radicals in the body. The encoded protein neutralizes supercharged oxygen molecules, which can damage cells if their levels are not controlled. Mutations in SOD1 cause a form of familial amyotrophic lateral sclerosis (ALS). Recombinant SOD1 was expressed in E. coli and purified by conventional chromatography techniques.

#### **Amino acid Sequence**

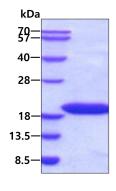
MATKAVCVLK GDGPVQGIIN FEQKESNGPV KVWGSIKGLT EGLHGFHVHE FGDNTAGCTS AGPHFNPLSR KHGGPKDEER HVGDLGNVTA DKDGVADVSI EDSVISLSGD HCIIGRTLVV HEKADDLGKG GNEESTKTGN AGSRLACGVI GIAQ

#### **General References**

Conwit R., et al. (2006) Journal of the Neurological Sciences251 (1-2). Banci L., et al. (2008) PLoS ONE. 3(2):e1677.

### DATA

#### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.