

Active Recombinant Human SOD1 Protein, Animal Free, Beta-lactam Antibiotics Free

Cat. No. SOD1-1570H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human SOD1 Protein (Animal Free, Beta-lactam Antibiotics Free, low endotoxin level) without tag was expressed in E. coli.
Species	Human
Source	E. coli
ProteinLength	1-154 aa
Description	The protein encoded by this gene binds copper and zinc ions and is one of two isozymes responsible for destroying free superoxide radicals in the body. The encoded isozyme is a soluble cytoplasmic protein, acting as a homodimer to convert naturally-occurring but harmful superoxide radicals to molecular oxygen and hydrogen peroxide. The other isozyme is a mitochondrial protein. In addition, this protein contains an antimicrobial peptide that displays antibacterial, antifungal, and anti-MRSA activity against E. coli, E. faecalis, S. aureus, S. aureus MRSA LPV+, S. agalactiae, and yeast C. krusei. Mutations in this gene have been implicated as causes of familial amyotrophic lateral sclerosis. Rare transcript variants have been reported for this gene.
pI	4.95
AASequence	MATKAVCVLKGDPVQGIINFEQKESNGPVKVVWGSIKGLTEGLHGFHVHEFGDNTA GCTSAGPHFNPLSRKHGGPKDEERHVGDLGNVTADKDGVADVSIEDSVISLSGDHC

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IIGRTLVVHEKADDLGKGGNEESTKTKGNAGSRLACGVIGIAQ

Molecular Mass

16 kDa

Bio-activity

35,380 units/mg

Endotoxin

< 1.0 EU/μg of the protein by the LAL method.

Purity

≥ 95% by SDS-PAGE

Unit Definition

One unit of SOD is defined as the amount of enzyme causing half the maximum inhibition of the oxidation of 7.5 mM NADH in the presence of EDTA, manganese ions, and mercaptoethanol at 23 centigrade and pH 7.4 in Invitrogen Superoxide Dismutase (SOD) Colorimetric Activity Kit.

Storage

Store it at -20 centigrade - -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. Stable for at least 1 year from receipt of products under proper storage and handling conditions

Storage Buffer

Sterile 20mM PB (pH 7.0), 0.1M NaCl

Reconstitution

It is recommended that sterile water be added to the vial to prepare a stock solution. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

GENE INFORMATION

Gene Name

SOD1 superoxide dismutase 1 [Homo sapiens (human)]

Official Symbol

SOD1

Synonyms

SOD1; superoxide dismutase 1, soluble; ALS, ALS1, amyotrophic lateral sclerosis 1

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(adult); superoxide dismutase [Cu-Zn]; IPOA; SOD, soluble; indophenoloxidase A; Cu/Zn superoxide dismutase; superoxide dismutase, cystolic; ALS; SOD; ALS1; hSod1; homodimer;

Gene ID [6647](#)

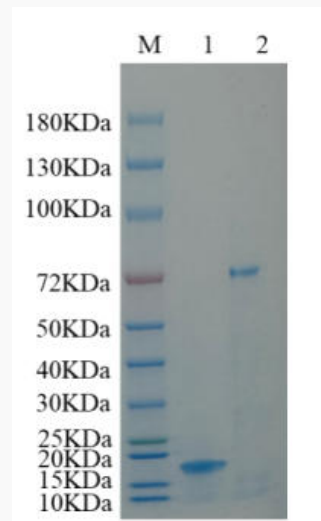
mRNA Refseq [NM_000454](#)

Protein Refseq [NP_000445](#)

MIM [147450](#)

UniProt ID [P00441](#)

SDS-PAGE



Reducing 4%-20% SDS-PAGE (CBB stained) analysis profile of purified SOD1. 1.
SOD1: 1 μ g 2. BSA: 1 μ g

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