

## SOD1 active protein

SOD1, 1-154aa, Human, E Coli (Bioactivity Validated)

|                              |                       |                                 |
|------------------------------|-----------------------|---------------------------------|
| CATALOG #<br><b>AAA48526</b> | HOST<br><b>E Coli</b> | APPLICATIONS<br><b>SDS-Page</b> |
|------------------------------|-----------------------|---------------------------------|

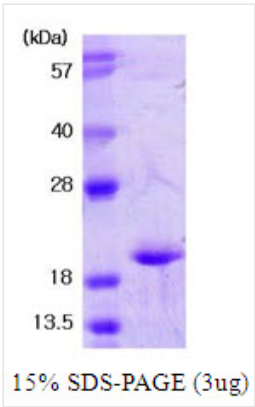
### PRODUCT SYNONYMS

SOD1; 1-154aa; Human; E Coli (Bioactivity Validated); Superoxide dismutase 1 soluble; ALS; SOD; ALS1; IPOA; Cu-Zn superoxide dismutase; 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 Cu Zn; Superoxide dismutase cystolic; ; SOD1 active protein

### PRODUCT SPECIFICATIONS

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                            | E Coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Purity/Purification                             | > 95% by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Form/Format                                     | Liquid in 20 mM Tris pH 7.5, 10% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Concentration                                   | 1 mg/ml (determined by Bradford assay) (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Sequence                                        | MATKAVCVLK GDGPVQGIIN FEQKESNGPV KVGWSIKGLT EGLHGFHVHE FGDNTAGCTS AGPHFNPLSR KHGGPKDEER HVGDLGNVTA DKDGVADVSI EDSVISLSGD HCIIGRTLTVV HEKADDLGKG GNEESTKTGN AGSRLACGVI GIAQ                                                                                                                                                                                                                                                                                                                      |
| Sequence Length                                 | 154                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Applicable Applications for SOD1 active protein | SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Antigen Species                                 | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Endotoxin Level                                 | < 1.0 EU per 1 microgram of protein (determined by LAL method)                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Biological Activity                             | Specific activity is > 1,000 units/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.                                                                                                                                                                                                                                                                                                   |
| Assay                                           | 1. Prepare a 180ul assay buffer mix into a suitable container and pre-chill on ice before use: The concentrations are 54mM potassium phosphate, 5.5mM ethylenediaminetetraacetic acid, 66mM cytochromC 0.9mM xanthine, 0.01 units xanthine oxidase. 2. Equilibrate to 25C and monitor at A550nm until the value is constant using a spectrophotometer. 3. Add 20ul of recombinant SOD1 protein to 50ug/ml in assay buffer. 4. Mix by inversion and record the increase at A550nm for 5 minutes. |
| Preparation and Storage                         | Can be stored at 4 degree C short term (1-2 weeks).<br>For long term storage, aliquot and store at -20 degree C or -70 degree C.<br>Avoid repeated freezing and thawing cycles.                                                                                                                                                                                                                                                                                                                 |

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

|                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for SOD1 active protein | 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. |
| Product Categories/Family for SOD1 active protein   | Redox Proteins                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| References                                          | Conwit R., et al. (2006) Journal of the Neurological Sciences 251 (1-2).; Banci L., et al. (2008) PLoS ONE. 3 (2):e1677.<br>; This product was used in the following article:: Kwon MJ et.al Superoxide dismutase 3 suppresses hyaluronic<br><a href="http://www.ncbi.nlm.nih.gov/pubmed/21957979">http://www.ncbi.nlm.nih.gov/pubmed/21957979</a> ;                                                                                                              |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                        |
|----------------------------------|------------------------------------------------------------------------|
| NCBI GI #                        | 4507149                                                                |
| NCBI GeneID                      | 6647                                                                   |
| NCBI Accession #                 | NP_000445                                                              |
| NCBI GenBank Nucleotide #        | NM_000454.4                                                            |
| UniProt Accession #              | P00441; Q16669; Q16711; Q16838; Q16839; Q16840; Q6NR85; A6NHJ0; D3DSE4 |
| Molecular Weight                 | 15.9 kDa (154 aa), confirmed by MALDI-TOF.                             |
| NCBI Official Full Name          | superoxide dismutase                                                   |
| NCBI Official Synonym Full Names | superoxide dismutase 1                                                 |
| NCBI Official Symbol             | SOD1                                                                   |
| NCBI Official Synonym Symbols    | ALS; SOD; ALS1; IPOA; hSod1; HEL-S-44; homodimer                       |
| NCBI Protein Information         | superoxide dismutase [Cu-Zn]                                           |
| UniProt Protein Name             | Superoxide dismutase [Cu-Zn]                                           |
| UniProt Gene Name                | SOD1                                                                   |
| UniProt Synonym Gene Names       | hSod1                                                                  |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | [contact@aaabiotech.com](mailto:contact@aaabiotech.com)  
Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/sod1/48526>