

# Product datasheet for AR03033PU-L

## Superoxide Dismutase 1 / SOD1 (1-154) Human Protein

### **Product data:**

#### **Product Type: Recombinant Proteins Description:** Superoxide Dismutase 1 / SOD1 (1-154) human recombinant protein, 0.5 mg Species: Human **Expression Host:** E. coli MATKAVCVLK GDGPVQGIIN FEQKESNGPV KVWGSIKGLT EGLHGFHVHE FGDNTAGCTS Expression cDNA Clone AGPHFNPLSR KHGGPKDEER HVGDLGNVTA DKDGVADVSI EDSVISLSGD HCIIGRTLVV or AA Sequence: HEKADDLGKG GNEESTKTGN AGSRLACGVI GIAQ Predicted MW: 15.9 kDa **Concentration:** lot specific **Purity:** >95% pure by SDS-PAGE **Buffer:** Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris pH 7.5, 10% Glycerol **Bioactivity:** Biological: 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 25°C. <1.0 EU per 1 microgram of protein (determined by LAL method) Endotoxin: **Preparation:** Liquid purified protein **Applications:** Protocol: Activity Assay 1. Prepare a 1.5 ml reaction mix into a suitable container and pre-chill on ice before use: The final concentrations are 50 mM potassium phosphate, 0.1 mM ethylendiaminetetraacetic acid, 0.01 mM cytochrom C, 0.05 mM xanthine, 0.005 units xanthine oxidase. 2. Equilibrate to 25°C and monitor at A550nm until the value is constant using a spectrophotometer. 3. Add 50 ul of recombinant SOD protein in various concentrations (0.5ug, 1ug) in assay buffer. 4. Mix by inversion and record the increase at A550nm for 5 minutes. **Protein Description:** Recombinant SOD1 was expressed in E.coli and purified by conventional chromatography techniques.



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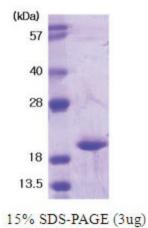
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	Superoxide Dismutase 1 / SOD1 (1-154) Human Protein – AR03033PU-L
Storage:	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	<u>NP 000445</u>
Locus ID:	6647
UniProt ID:	<u>P00441, V9HWC9</u>
Cytogenetics:	21q22.11
Synonyms:	ALS; ALS1; HEL-S-44; homodimer; hSod1; IPOA; SOD; STAHP
Summary:	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-occuring 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. [provided by RefSeq, Jul 2020]
Protein Families:	Druggable Genome
Protein Pathway	<b>s:</b> Amyotrophic lateral sclerosis (ALS), Huntington's disease, Prion diseases

## Product images:



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