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Product datasheet for AR03033PU-N

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

Product data:

Product Type:	Recombinant Proteins
Description:	Superoxide Dismutase 1 / SOD1 (1-154) human recombinant protein, 0.1 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MATKAVCVLK GDGPVQGIIN FEQKESNGPV KVWGSIKGLT EGLHGFHVHE FGDNTAGCTS AGPHFNPLSR KHGGPKDEER HVGDLGNVTA DKDGVADVSI EDSVISLSGD HCIIGRTLVV 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.
Endotoxin:	<1.0 EU per 1 microgram of protein (determined by LAL method)
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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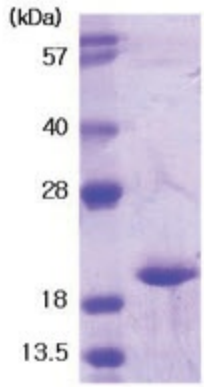
Storage:	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_000445
Locus ID:	6647
UniProt ID:	P00441, V9HWC9
Cytogenetics:	21q22.11
Synonyms:	ALS; ALS1; HEL-S-44; homodimer; 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 Pathways:	Amyotrophic lateral sclerosis (ALS), Huntington's disease, Prion diseases

Product images:



15% SDS-PAGE (3ug)