

**AR03033PU-L****Human Superoxide Dismutase 1 / SOD1 (1-154) - Purified**

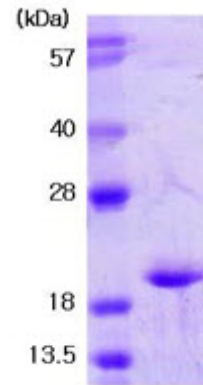
<b>Alternate names:</b>	ALS1, CuZn-SOD, CuZnSOD, IPOA, SOD-1, Superoxide dismutase [Cu-Zn]
<b>Quantity:</b>	0.5 mg
<b>Concentration:</b>	1.0 mg/ml (determined by Bradford assay)
<b>Background:</b>	Superoxide dismutase 1 (SOD1) binds copper and zinc ions and is one of three isozymes responsible for destroying 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).
<b>Uniprot ID:</b>	<a href="#">P00441</a>
<b>NCBI:</b>	<a href="#">NP_000445.1</a>
<b>GeneID:</b>	<a href="#">6647</a>
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Format:</b>	<b>State:</b> Liquid purified protein <b>Purity:</b> >95% pure by SDS-PAGE <b>Buffer System:</b> 20 mM Tris pH 7.5, 10% Glycerol <b>Endotoxin Level:</b> <1.0 EU per 1 microgram of protein (determined by LAL method)
<b>Description:</b>	Recombinant SOD1 was expressed in E.coli and purified by conventional chromatography techniques. <b>AA Sequence:</b> MATKAVCVLK GDGPVQGIIN FEQKESNGPV KVGSIKGLT EGLHGFHVHE FGDNTAGCTS AGPHFNPLSR KHGGPKDEER HVGDLGNVTA DKDGVADVSI EDSVISLSGD HCIIGRTLTVV HEKADDLGKG GNEESTKTGN AGSRLACGVI GIAQ <b>Biological Activity:</b> 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. <b>Molecular weight:</b> 15.9 kDa (154 aa) confirmed by MALDI-TOF
<b>Storage:</b>	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. Shelf life: one year from despatch.
<b>General Readings:</b>	1. Conwit R., et al.,(2006) Journal of the Neurological Sciences 251 (1-2). 2. Banci L., et al.,(2008) PLoS ONE. Feb 27;3(2):e1677.
<b>Protocols:</b>	<b>Activity Assay</b> 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 ethylenediaminetetraacetic 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.

**Pictures:**



15% SDS-PAGE (3ug)