

SOD1 recombinant protein

SOD1 Protein, Human, Recombinant (His Tag)

CATALOG #
AAA257989

HOST
E Coli

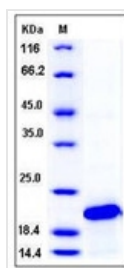
PRODUCT SYNONYMS

SOD1; SOD1 Protein; Human; Recombinant (His Tag); Human SOD1/Superoxide Dismutase Protein (His Tag); ALS Protein; ALS1 Protein; HEL-S-44 Protein; homodimer Protein; hSod1 Protein; IPOA Protein; SOD Protein; superoxide dismutase 1; soluble; SOD1 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	>95% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile 20mM Tris, 500mM NaCl, pH8.0. 5% trehalose, 5% mannitol and 0.01% Tween80
Source	Human
Predicted N Terminal	Met
Protein Construction	A DNA sequence encoding the human SOD1 (NP_000445.1)(Ala 2-Gln 154) was expressed, with a polyhistide tag at the N-terminus.
Reconstitution	It is recommended that sterile water (200ul) be added to the vial to prepare a stock solution of 0.25mg/mL. Concentration is measured by UV-Vis.
Stability	Samples are stable for up to twelve months from date of receipt at -70°C
Preparation and Storage	Store it under sterile conditions at -20°C to -80°C upon receiving. Recommended to aliquot the protein into smaller quantities for optimal storage.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for SOD1 recombinant protein	Background: SOD1 belongs to the Cu-Zn superoxide dismutase family. It 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. Mutations in this gene have been implicated as causes of familial amyotrophic lateral sclerosis. Rare transcript variants have been reported for this gene. SOD1 destroys radicals which are normally produced within the cells and which are toxic to biological systems. Defects in SOD1 are the cause of amyotrophic lateral sclerosis type 1 (ALS1). ALS1 is a familial form of amyotrophic lateral sclerosis, a neurodegenerative disorder affecting upper and lower motor neurons and resulting in fatal paralysis. Sensory abnormalities are absent. Death usually occurs within 2 to 5 years. The etiology of amyotrophic lateral sclerosis is likely to be multifactorial, involving both genetic and environmental factors. The disease is inherited in 5-10% of cases leading to familial forms.
References	Murakami K, et al. (2011) SOD1 (copper/zinc superoxide dismutase) deficiency drives amyloid beta protein oligomerization and memory loss in mouse model of Alzheimer disease. J Biol Chem. 286(52):44557-68. Thompson M, et al. (2012) Paradoxical roles of serine racemase and D-serine in the G93A mSOD1 mouse model of amyotrophic lateral sclerosis. J Neurochem. 120(4):598-610. Magrana J, et al. (2012) Mitochondrial dynamics and bioenergetic dysfunction is associated with synaptic alterations in mutant SOD1 motor neurons. J Neurosci. 32(1):229-42. Gertz B, et al. (2012) Nuclear localization of human SOD1 and mutant SOD1-specific disruption of survival motor neuron protein complex in transgenic amyotrophic lateral sclerosis mice. J Neuropathol Exp Neurol. 71(2):162-77.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4507149
NCBI GeneID	6647
NCBI Accession #	NP_000445.1
NCBI GenBank Nucleotide #	NM_000454.4
UniProt Accession #	P00441 ; Q16669 ; Q16711 ; Q16838 ; Q16839 ; Q16840 ; Q6NR85 ; A6NHJ0 ; D3DSE4
Molecular Weight	The recombinant human SOD1 consisting of 161 amino acids and has a calculated molecular mass of 16.8 kDa. It migrates as an approximately 20 kDa band in SDS-PAGE under reducing conditions.
NCBI Official Full Name	superoxide dismutase
NCBI Official Synonym Full Names	superoxide dismutase 1, soluble
NCBI Official Symbol	SOD1
NCBI Official Synonym Symbols	ALS; SOD; ALS1; IPOA; hSod1; HEL-S-44; homodimer
NCBI Protein Information	superoxide dismutase [Cu-Zn]; superoxide dismutase [Cu-Zn]; Cu/Zn superoxide dismutase; SOD, soluble; epididymis secretory protein Li 44; indophenoloxidase A; superoxide dismutase, cytosolic
UniProt Protein Name	Superoxide dismutase [Cu-Zn]
UniProt Gene Name	SOD1
UniProt Synonym Gene Names	hSod1
UniProt Entry Name	SODC_HUMAN

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.