

Superoxide Dismutase Protein Monomers Recombinant Protein | SOD recombinant protein

Human Recombinant Superoxide Dismutase Protein Monomers

CATALOG # AAA254085	HOST E coli	APPLICATIONS SDS-Page, Western Blot
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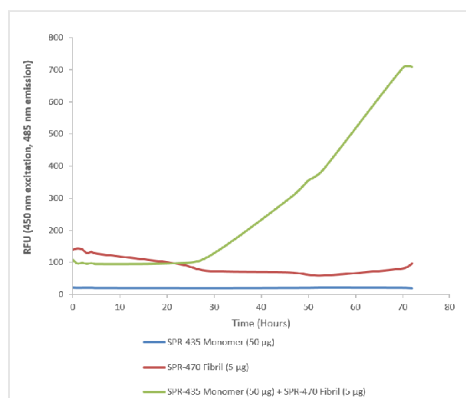
PRODUCT SYNONYMS

Superoxide Dismutase Protein Monomers; Human Recombinant Superoxide Dismutase Protein Monomers; Superoxide Dismutase Monomers; Superoxide Dismutase (SOD); Superoxide dismutase1 Protein Monomer; ALS1 Protein Monomer; SOD1 Protein Monomer; IPOA Protein Monomer; SOD recombinant protein

PRODUCT SPECIFICATIONS

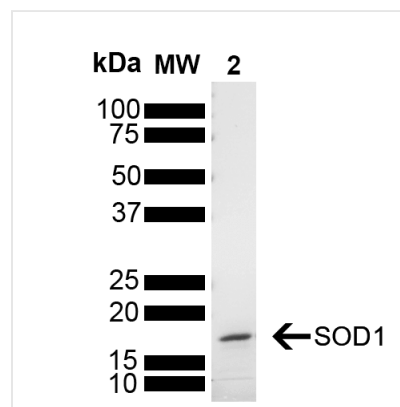
Host	E coli
Purity/Purification	>95%; Ion-exchange Purified
Form/Format	PB pH 7.4
Concentration	Lot/batch specific. See included datasheet. (varies by lot)
Sequence Length	Full length
Applicable Applications for SOD recombinant protein	Invitro Assay, SDS-PAGE, WB (Western Blot)
Species	Human
Conjugation	No Tag
Research Area	Cancer, Oxidative Stress, Cell Signaling, Protein Trafficking, Chaperone Proteins, Neuroscience, Neurodegeneration, ALS Disease
Cellular Localization	Nucleus, Mitochondrion, Cytoplasm
Certificate of Analysis	Certified >95% pure using SDS-PAGE analysis.
Preparation and Storage	Store at -80 degree C

IMAGES



Application Data

Thioflavin T assay of SOD1 pre-formed fibrils (PFFs) combined with SOD1 monomers (AAA254085). Pre-formed fibrils seed the aggregation of monomers, leading to an increase in Thioflavin T fluorescence.



SDS-PAGE

SDS-PAGE of human SOD1 monomer protein (AAA254085). Load: 2 µg

ADDITIONAL INFORMATION

Related Product Information for SOD recombinant protein	Superoxide dismutase (SOD) is an endogenously produced intracellular enzyme present in almost every cell in the body (3). It works by catalyzing the dismutation of the superoxide radical O ₂ ⁻ to O ₂ and H ₂ O ₂ , which are then metabolized to H ₂ O and O ₂ by catalase and glutathione peroxidase (2,5). In general, SODs play a major role in antioxidant defense mechanisms (4). There are two main types of SOD in mammalian cells. One form (SOD1) contains Cu and Zn ions as a homodimer and exists in the cytoplasm. The two subunits of 16 kDa each are linked by two cysteines forming an intra-subunit disulphide bridge (3). The second form (SOD2) is a manganese containing enzyme and resides in the mitochondrial matrix. It is a homotetramer of 80 kDa. The third form (SOD3 or EC-SOD) is like SOD1 in that it contains Cu and Zn ions, however it is distinct in that it is a homotetramer, with a mass of 30 kDa and it exists only in the extra-cellular space (7). SOD3 can also be distinguished by its heparin-binding capacity (1). Studies have shown that in vitro, Cu-Zn SOD (SOD1) fibrils are transduced into cells and function as seeds to trigger the aggregation of endogenously expressed SOD1 (9).
Product Categories/Family for SOD recombinant protein	Proteins
References	1. Adachi T., et al. (1992). Clin. Chim. Acta. 212: 89-102.2. Barrister J.V., et al. (1987). Crit. Rev. Biochem. 22:111-180.3. Furukawa Y., O'Halloran T. (2006). Antioxidants & Redo Signaling. Vol 8, No 5,6.4. Gao B., et al. (2003). Am J Physiol Lung Cell Mol Physiol 284: L917-L925.5. Hassan H.M. (1988). Free Radical Biol. Med. 5: 377-385.6. Kurobe N., et al. (1990) Biomedical Research. 11: 187-194.7. Wispe J.R., et al. (1989) BBA. 994: 30-36.8. Xiao-Hong Liu., et al. (1993) Brain Research. 625: 29-37. 9. Furukawa Y., et al. (2013) FEBS 587(16): 2500-2505.

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	15,936 Da
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, cystolic
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.

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Online datasheet: <https://stage.aaabiotech.com/sod1-recombinant-protein-e-coli-inviro-assay-sds-page-wb-western-blot/254085>