

Superoxide Dismutase 1 (SOD1) Active Protein | SOD1 active protein

Active Superoxide Dismutase 1 (SOD1)

CATALOG # AAA153106	HOST E. coli	REACTIVITY Homo sapiens (Human)	APPLICATIONS Activity Assay, Cell Culture
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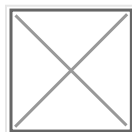
PRODUCT SYNONYMS

Superoxide Dismutase 1 (SOD1); Active Superoxide Dismutase 1 (SOD1); Superoxide Dismutase 1; SOD1 active protein (prokaryotic); Human; ALS; ALS1; IPOA; Soluble; Amyotrophic Lateral Sclerosis 1; Adult; Superoxide dismutase [Cu-Zn]; SOD1 active protein

PRODUCT SPECIFICATIONS

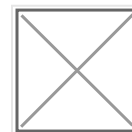
Host	E. coli
Reactivity	Homo sapiens (Human)
Purity/Purification	>90%
Form/Format	PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.
Concentration	Original Concentration: 350ug/mL (varies by lot)
Applicable Applications for SOD1 active protein	Activity Assay, Cell Culture
Source	Prokaryotic expression.
Residues	Ala2~Gln154
Tags	N-terminal His-tag
Traits	Freeze-dried powder
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method).
Predicted isoelectric point	6.1
Usage	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

IMAGES



SDS_PAGE

Sample: Active recombinant SOD1, Human



Gene Sequencing

Gene Sequencing (extract)



Bioactivity

Superoxide Dismutase 1 (SOD1) is an enzyme that in human is encoded by the SOD1 gene. This gene encodes a member of the superoxide dismutase (SOD) protein family. SODs are antioxidant enzymes that catalyze the dismutation of two superoxide radicals into hydrogen peroxide and oxygen. According to the report, in a weakly alkaline buffer solution (pH=8.2) with N-tris(hydroxymethyl)amino methane-HCL, pyrogallol can occur autooxidation in the air, then SOD can inhibit this reaction. Thus, we use this way to measure the activity of recombinant human SOD1. The reaction was performed in adding 7 ul 5 mmol/L pyrogallol to 200 ul 50 mmol/L Tris-HCl, rapidly mixing at 25 degree C, then read at 325 nm (using 50mmol/L Tris-HCl as blank control) in kinetic mode for 3 minutes using a microplate reader controlling the pyrogallol autooxidation rate at 0.70 OD/min. Different concentrations of recombinant human SOD1 were added into 200 ul 50 mmol/L Tris-HCl, incubated for 20 min at 25 degree C, then adding 7ul 5mmol/L pyrogallol to each well, rapidly mixing and read at 325 nm in kinetic mode for 3 minutes. Under these conditions, the enzyme amount of 50% inhibition of pyrogallol autooxidation per minute is defined as a unit. The specific activity of recombinant human SOD1 is 732 U/mg.



Sequence

ADDITIONAL INFORMATION

Product Categories/Family for SOD1
active protein

[Active proteins](#)

NCBI AND UNIPROT INFORMATION

NCBI GI #	134611
NCBI GeneID	6647
UniProt Accession #	P00441; Q16669; Q16711; Q16838; Q16839; Q16840; Q6NR85; A6NHJ0; D3DSE4
Molecular Weight	Predicted Molecular Mass: 17.1kDa Accurate Molecular Mass: 19kDa as determined by SDS-PAGE 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]; SOD, soluble; indophenoloxidase A; Cu/Zn superoxide dismutase; superoxide dismutase, cytosolic; epididymis secretory protein Li 44
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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/e-coli-homo-sapiens-human-active-protein/superoxide-dismutase-1-sod1/153106>