

Superoxide Dismutase Copper Chaperone Active Protein | CCS active protein

Active Superoxide Dismutase Copper Chaperone

CATALOG # AAA161750	HOST E. coli	REACTIVITY Mus musculus (Mouse)	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Superoxide Dismutase Copper Chaperone; Active Superoxide Dismutase Copper Chaperone; CCS; Copper Chaperone For Superoxide Dismutase4; CCS active protein

PRODUCT SPECIFICATIONS

Host	E. coli
Reactivity	Mus musculus (Mouse)
Purity/Purification	>95%
Form/Format	PBS, pH7.4, containing 0.01% Sarcosyl, 5% Trehalose.
Concentration	Original Concentration: 400ug/mL (varies by lot)
Applicable Applications for CCS active protein	Activity Assay, Cell Culture
Source	Prokaryotic expression.
Residues	Ala17~Pro270
Tags	N-terminal His-tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method).
Predicted isoelectric point	6.3
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 SOD4, Mouse



Bioactivity

Superoxide dismutase copper chaperone (SOD4) is an enzyme that in humans is encoded by the CCS 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 mouse SOD4. The reaction was performed in adding 8 ul 5 mmol/L pyrogallol to 200 ul 50mmol/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 mouse SOD4 were added into 200 ul 50 mmol/L Tris-HCL, incubated for 20 min at 25 degree C, then adding 8 ul 5 mmol/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 mouse SOD4 is 66.88 U/mg.



Sequence

ADDITIONAL INFORMATION

Product Categories/Family for CCS active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	8393066
NCBI GeneID	12460
NCBI Accession #	NP_058588.1
NCBI GenBank Nucleotide #	NM_016892.3
UniProt Accession #	Q9WU84; Q9CRJ9
Molecular Weight	Predicted Molecular Mass: 30.6kDa Accurate Molecular Mass: 33kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	copper chaperone for superoxide dismutase
NCBI Official Synonym Full Names	copper chaperone for superoxide dismutase
NCBI Official Symbol	Ccs
NCBI Official Synonym Symbols	Ccsd
NCBI Protein Information	copper chaperone for superoxide dismutase; superoxide dismutase copper chaperone
UniProt Protein Name	Copper chaperone for superoxide dismutase
UniProt Gene Name	Ccs
UniProt Synonym Gene Names	Ccsd
UniProt Entry Name	CCS_MOUSE

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/e-coli-ccs-mouse-mus-musculus-active-protein/superoxide-dismutase-copper-chaperone/161750>