

SOD2 active protein

SOD2, 25-222aa, Human, His tag, E Coli (Bioactivity Validated)

CATALOG # AAA48636	HOST E Coli	APPLICATIONS SDS-Page
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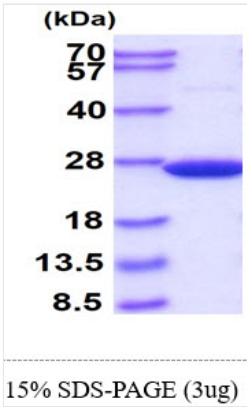
PRODUCT SYNONYMS

SOD2; 25-222aa; Human; His tag; E Coli (Bioactivity Validated); Superoxide dismutase [Mn] mitochondrial; IPOB; MNSOD; MVCD6; Superoxide dismutase [Mn]; mitochondrial IPO B; Manganese SOD; Manganese superoxide dismutase; Mn SOD; SOD 2; Superoxide dismutase 2 mitochondrial; Superoxide Dismutase-2; SOD2 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	> 95% by SDS-PAGE
Form/Format	Liquid. 20mM Tris-HCl Buffer (pH 8.0) containing 20% glycerol
Concentration	0.5 mg/ml (determined by Bradford assay) (varies by lot)
Sequence	MGSSHHHHH SSGLVPRGSH MKHSLPDLPY DYGALEPHIN AQIMQLHHSK HHAAYVNNLN VTEEKYQEAL AKGDVTAQIA LQPALKFNGG GHINHSIFWT NLSPNGGGEP KGELLEAIKR DFGSFDKFKE KLTAASVGVQ GSGWGWLGFN KERHGLQIAA CPNQDPLQGT TGLIPLLID VWEHAYYLQY KNVRPDYLKA IWNVINWENV TERYMACKK
Sequence Length	222
Applicable Applications for SOD2 active protein	SDS-PAGE
Antigen Species	Human
Tag Information	His-tag
Biological Activity	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 25C.
Assay	1. Prepare a 180ul assay buffer into a suitable container and pre-chill on ice before use: The concentrations are 54mM potassium phosphate, 5.5mM ethylenediaminetetraacetic acid, 66mM cytochromC 0.9mM xanthine, 0.01 units xanthine oxidase. 2. Equilibrate to 25C and monitor at A550nm until the value is constant using a spectrophotometer. 3. Add 20ul of recombinant SOD2 protein to 50ug/ml in assay buffer. 4. Mix by inversion and record the increase at A550nm for 5 minutes.
Preparation and Storage	Can be stored at 4 degree C short term (1-2 weeks). For long term storage, aliquot and store at -20 degree C or -70 degree C. Avoid repeated freezing and thawing cycles.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for SOD2 active protein	SOD2 is a member of the iron/manganese superoxide dismutase family. It is a mitochondrial matrix protein that forms a homotetramer and binds one manganese ion per subunit. This protein binds to the superoxide byproducts of oxidative phosphorylation and converts them to hydrogen peroxide and diatomic oxygen. Mutations in this protein have been associated with idiopathic cardiomyopathy (IDC), premature aging, sporadic motor neuron disease, and cancer. Recombinant human SOD2 protein was expressed in E Coli and purified by using conventional chromatography techniques.
Product Categories/Family for SOD2 active protein	Redox Proteins
References	MacMillan-Crow L.A., et al. (1999) Arch. Biochem. Biophys. 366:82-88; Prunotto M, et al. (2010) J Am Soc Nephrol. 21 (3):507-19.;

NCBI AND UNIPROT INFORMATION

NCBI GI #	67782307
NCBI GeneID	6648
NCBI Accession #	NP_001019636
NCBI GenBank Nucleotide #	NM_001024465.2
UniProt Accession #	P04179; P78434; Q16792; Q5TCM1; Q96EE6; Q9P2Z3; B2R7R1; B3KUK2; B4DL20; B4E3K9; E1P5A9
Molecular Weight	24.4kDa (219aa), confirmed by MALDI-TOF.
NCBI Official Full Name	superoxide dismutase
NCBI Official Synonym Full Names	superoxide dismutase 2
NCBI Official Symbol	SOD2
NCBI Official Synonym Symbols	IPOB; IPO-B; MNSOD; MVCD6; Mn-SOD
NCBI Protein Information	superoxide dismutase [Mn], mitochondrial
UniProt Protein Name	Superoxide dismutase [Mn], mitochondrial
UniProt Gene Name	SOD2

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.