

Recombinant Human SOD1 Protein

Cat. No. SOD1-1037H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human SOD1(1-154aa) was expressed in E. coli.

Species Human

Source E.coli

ProteinLength 1-154aa

Description

Superoxide dismutase (SOD) is an antioxidant enzyme involved in the defense system against reactive oxygen species (ROS). SOD catalyzes the dismutation reaction of superoxide radical anion (O₂⁻) to hydrogen peroxide, which is then catalyzed to innocuous O₂ and H₂O by glutathione peroxidase and catalase. Several classes of SOD have been identified. These include intracellular copper, zinc SOD (Cu, Zn-SOD/SOD-1), mitochondrial manganese SOD (Mn-SOD/SOD-2) and extracellular Cu, Zn-SOD (EC-SOD/SOD-3). SOD-1 is found in all eukaryotic species as a homodimeric 32-kDa enzyme containing one each of Cu and Zn ion per subunit. The manganese containing 80-kDa tetrameric enzyme SOD2, is located in the mitochondrial matrix in close proximity to a primary endogenous source of superoxide, the mitochondrial respiratory chain. SOD-3 is a heparin-binding multimer of disulfide-linked dimers, primarily expressed in human lungs, vessel walls and airways (4). SOD-4 is a copper chaperone for superoxide dismutase (CCS), which specifically delivers Cu to copper/zinc superoxide dismutase. CCS may activate copper/zinc superoxide dismutase through direct insertion of the Cu cofactor.

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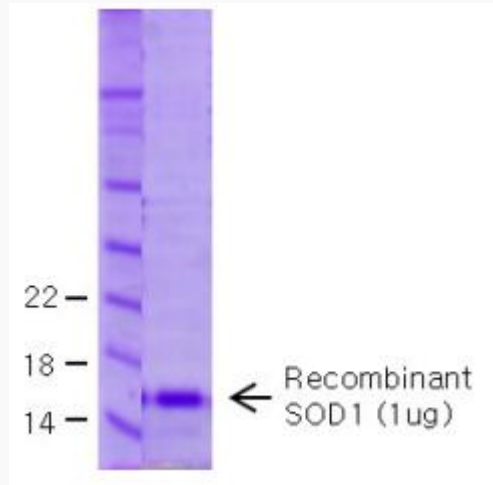
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Form	Lyophilized from 20mM HEPES, 150mM NaCl, 1mM EDTA, pH 7.5
Molecular Mass	16 kDa
Purity	> 95% by SDS-PAGE
Storage	Shipped at 4 centigrade. Store at -20 centigrade. After reconstitution, store at -80 centigrade and avoid frequent freeze and thaw.
Concentration	1 mg/ml
GENE INFORMATION	
Gene Name	SOD1 superoxide dismutase 1, soluble [Homo sapiens]
Official Symbol	SOD1
Synonyms	SOD1; superoxide dismutase 1, soluble; ALS, ALS1, amyotrophic lateral sclerosis 1 (adult); superoxide dismutase [Cu-Zn]; IPOA; SOD, soluble; indophenoxidase A; Cu/Zn superoxide dismutase; superoxide dismutase, cystolic; ALS; SOD; ALS1; hSod1; homodimer;
Gene ID	6647
mRNA Refseq	NM_000454
Protein Refseq	NP_000445
MIM	147450
UniProt ID	P00441

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