Recombinant Human SOD1 protein, His-tagged

Cat. No. SOD1-642H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human SOD1 protein, fused to His-tag at N-terminus, was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	189
Description	Superoxide dismutase catalyzes the reaction between superoxide anions and hydrogen to yield molecular oxygen and hydrogen peroxide. Cu/Zn superoxide dismutase also named as SOD1, is an enzyme encoded by the SOD1 gene in humans, located on chromosome 21. The SOD1 binds Cu and Zn ions and is one of three SODs responsible for destroying free superoxide radicals in the body. It has been shown to interact with CCS and Bcl-2. The malfunction of SOD1 may increase the risk of illnesses like age-related muscle mass loss (sarcopenia), early development of cataracts, macular degeneration, thymic involution, hepatocellular carcinoma, shortened lifespan, keratoconus and amyotrophic lateral sclerosis.
Form	Lyophilized from a 0.2μm filtered concentrated solution in PBS, pH 7.4.
Bio-activity	Fully biologically active when compared to standard. The potency per mg was determined by Pyrogallic Acid method and was found to be more than 1.0×10^4 IU/mg.

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Molecular Mass	Approximately 39.9 kDa, a homodimer, non-glycosylated polypeptide chain containing 2 × 189 amino acids with Met, Gly and 10 × His at N-terminus.
AA Sequence	MGHHHHHHHHHHSSGHIEGRHMTYARAAARQARALEATKAVCVLKGDGPVQGIIN FEQKESNGPVKVWGSIKGLTEGLHGFHVHEFGDNTAGCTSAGPHFNPLSRKHGGP KDEERHVGDLGNVTADKDGVADVSIEDSVISLSGDHCIIGRTLVVHEKADDLGKGGN EESTKTGNAGSRLACGVIGIAQ
Endotoxin	Less than 1 EU/μg of rHuCu/Zn SOD, His as determined by LAL method.
Purity	>95% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	SOD1
Official Symbol	SOD1
Synonyms	SOD1; superoxide dismutase 1, soluble; ALS, ALS1, amyotrophic lateral sclerosis 1 (adult); superoxide dismutase [Cu-Zn]; IPOA; SOD, soluble; indophenoloxidase A;

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	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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