

Human SOD Protein (Active)

Catalogue No.: abx060221

Human SOD Protein is a recombinant protein from E. Coli. Superoxide dismutases (SOD) are enzymes that catalyze the dismutation of superoxide into oxygen and hydrogen peroxide. Thus, they are an important antioxidant defense in nearly all cells exposed to oxygen. Several common forms of SOD exist: they are proteins cofactored with copper and zinc, or manganese, iron, or nickel. Thus, there are three major families of superoxide dismutase, depending on the metal cofactor: Cu/Zn (which binds both copper and zinc), Fe and Mn types (which bind either iron or manganese), and the Ni type, which binds nickel. Three forms of superoxide dismutase are present in humans, in all other mammals, and most chordates. SOD1 is located in the cytoplasm, SOD2 in the mitochondria, and SOD3 is extracellular. Mutations in the first SOD enzyme (SOD1) can cause familial amyotrophic lateral sclerosis (ALS, a form of motor neuron disease). The other two isoforms of SOD have not been linked to any human diseases, however, in mice inactivation of SOD2 causes perinatal lethality and inactivation of SOD1 causes hepatocellular carcinoma.

Target: SOD Protein (Active)**Origin:** Human**Host:** E. coli**Tested Applications:** SDS-PAGE**Purity:** > 95% (HPLC and SDS-PAGE). Contains < 1% Dimers (SDS-PAGE).**Form:** Lyophilized**Reconstitution:** Reconstitute with sterile 18MΩ-cm H₂O.**Conjugation:** Unconjugated**Storage:** Ships at 4 °C. Upon receipt, store at -20 °C or -80 °C for up to 2 years. After reconstituting, store at 4 °C for up to week. It is recommended to add 0.1% HSA or BSA for long-term storage. Avoid repeated freeze/thaw cycles.**Molecular Weight:** 16 kDa**Swiss Prot:** [P00441](#)**GeneID:** [6647](#)**OMIM:** [147450](#)**Activity:** Active

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Biological Activity: 8000 U/mg by Pyrogallic Acid method.

Endotoxin Level: < 0.1 ng/μg (1 EU/μg) by LAL test.

Buffer: Prior to lyophilization: 10 mM Phosphate buffer and 200 mM NaCl (pH 7.0). Does not contain preservatives.

Note: This product is for research use only.