

# Human SOD2, C-His Tag Protein

HA211476



<b>Product name:</b>	Human SOD2, C-His Tag
<b>Species reactivity:</b>	Human
<b>Bio-Activity:</b>	Testing in progress.
<b>Protein construction description:</b>	A DNA sequence encoding the human SOD2 protein (P04179-1) (Lys 25-Lys 222) was expressed with a His tag at the C-terminus.

**Background:** The superoxide dismutase family is composed of three metalloenzymes (SOD-1, SOD-2 and SOD-3) that catalyze the oxido-reduction of reactive oxygen species (ROS) such as superoxide anion. The SOD-2 precursor is a 222 amino acid protein that is encoded by nuclear chromatin, synthesized in the cytosol and imported posttranslationally into the mitochondrial matrix. Unlike SOD-1, which is a homodimeric cytosolic Cu-Zn enzyme, SOD-2 is a homotetrameric manganese enzyme (also known as MnSOD) that functions in the mitochondrion. ROS are implicated in a wide range of degenerative processes, including Alzheimer's disease, Parkinson's disease and ischemic heart disease. Homozygous mutant mice, which lack SOD-2, exhibit dilated cardiomyopathy, accumulation of lipid in liver and skeletal muscle, metabolic acidosis, oxidative DNA damage and respiratory chain deficiencies in heart and skeletal muscle. Polymorphisms in the SOD-2 gene have also been implicated in nonfamilial, idiopathic, dilated cardiomyopathy in humans.

**Purity:** >95% as determined by SDS-PAGE.

**Endotoxin:** Less than 1.0 EU per µg by the LAL method.

**Fragment region:** SOD2 (25-222)

**Source:** E.coli

**Accession:** P04179-1

**Predicted molecular mass:** 24.6 kD

**Formulation:** Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.

**Reconstitution:** Reconstitute at 250 µg/ml in sterile water.

**Storage:** Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20°C to -80°C. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.

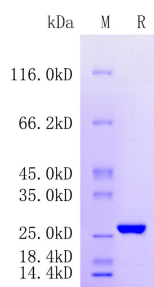
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**Fig1:** Protein on SDS-PAGE under reducing (R) condition.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".