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**Product Data Sheet**


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Product Name: SOD2 Human  
 Cat. No.: GP24658  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	MNSOD; MVCD6; IPOB; Mn superoxide dismutase; EC=1.15.1.1.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MKHSLPDLPY DYGALEPHIN AQIMQLHHSK HHAAYVNNLN VTEEKYQEAL AKGDVTAQIA LQPALKFNGG GHINHSIFWT NLSPNGGGEP KGELLEAIKR DFGSFDKFKLTAASVGVQ GSGWGWLGFN KERGHLLQIAA CPNQDPLQGT TGLIPLLID VWEHAYYLQY KNVRPDYLKA IWNVINWENV TERYMACKK.		
Formulation	SOD2 Human solution containing 20mM Tris-HCl pH-8 & 20% glycerol.		

**Introduction**

SOD2 is part of the iron/manganese superoxide dismutase family. It encodes a mitochondrial protein that forms a homotetramer and binds one manganese ion per subunit. SOD2 binds to the superoxide byproducts of oxidative phosphorylation and converts them to hydrogen peroxide and diatomic oxygen. Mutations in SOD2 gene have been associated with idiopathic cardiomyopathy (IDC), premature aging, sporadic motor neuron disease, and cancer. SOD2 destroys radicals which are usually produced within the cells and which are toxic to biological systems.

**Biological Activity**

Specific activity is > 1,200 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 7.8 at 25C in a 1.5 ml reaction volume.

**Stability**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1%

**Caution: Product has not been fully validated for medical applications. For research use only.**

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HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

SOD2 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 219 amino acids (25-222 a.a.) and having a molecular mass of 24.4kDa. SOD2 protein is fused to a 20 amino acid His-Tag at N-terminus and purified by standard chromatography.

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