



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## SOD PROTEIN

Human Recombinant Superoxide dismutase  
Protein Preformed Fibrils  
Catalog No. SPR-470



Discovery through partnership | Excellence through quality

### Product Name

SOD Protein

### Description

Human Recombinant Superoxide dismutase Protein Preformed Fibrils

### Applications

WB, SDS-PAGE, In vivo assay, In vitro assay

### Concentration

Lot/batch specific. See included datasheet.

### Conjugates

No tag

### Nature

Recombinant

### Species

Human

### Expression System

E. coli

### Purity

>95%

### Protein Length

Full Length

### Field Of Use

Not for use in humans. Not for use in diagnostics or therapeutics. For in vitro research use only.

## Properties

**Storage Buffer**

PBS pH 7.4

**Storage Temperature**

-80°C

**Shipping Temperature**

Dry Ice. Shipping note: Product will be shipped separately from other products purchased in the same order.

**Purification**

Ion-exchange Purified

**Specificity**

15.936 kDa

**Cite This Product**

Human Recombinant SOD Protein (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-470)

**Certificate Of Analysis**

Certified &gt;95% pure using SDS-PAGE analysis.

**Biological Description****Alternative Names**

Superoxide dismutase1 Protein, ALS1 Protein , SOD1 Protein, IPOA Protein

**Research Areas**

Cancer, Cell Signaling, Chaperone Proteins, Oxidative Stress, Protein Trafficking

**Cellular Localization**

Cytoplasm, Mitochondrion, Nucleus

**Accession Number**

NP\_000445.1

**Gene ID**

6647

**Swiss Prot**

P00441

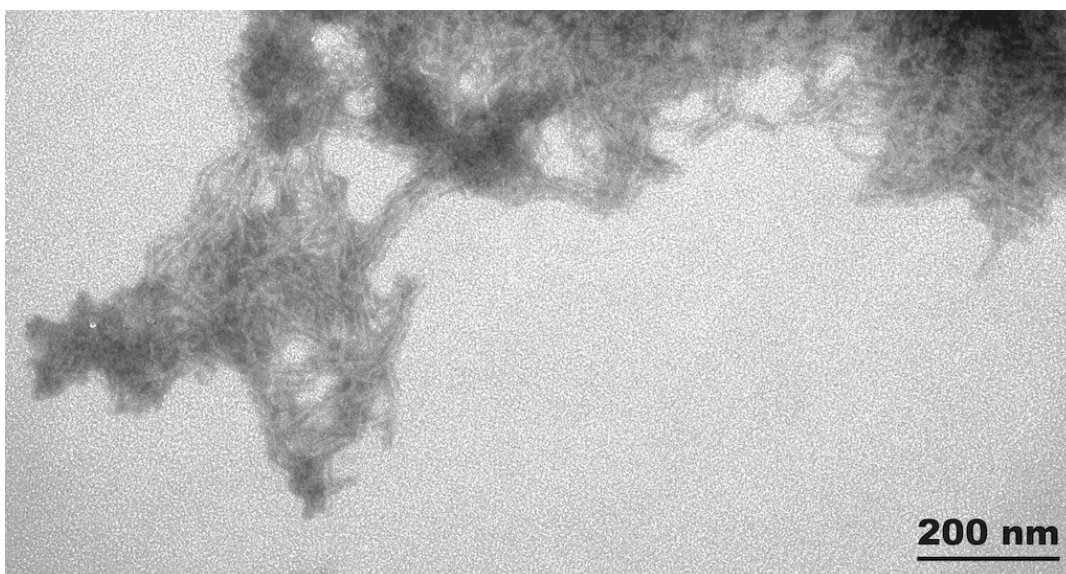
## Scientific Background

Superoxide dismutase (SOD) is an endogenously produced intracellular enzyme present in almost every cell in the body (3). It works by catalyzing the dismutation of the superoxide radical  $O_2^-$  to  $O_2$  and  $H_2O_2$ , which are then metabolized to  $H_2O$  and  $O_2$  by catalase and glutathione peroxidase (2,5). In general, SODs play a major role in antioxidant defense mechanisms (4). There are two main types of SOD in mammalian cells. One form (SOD1) contains Cu and Zn ions as a homodimer and exists in the cytoplasm. The two subunits of 16 kDa each are linked by two cysteines forming an intra-subunit disulphide bridge (3). The second form (SOD2) is a manganese containing enzyme and resides in the mitochondrial matrix. It is a homotetramer of 80 kDa. The third form (SOD3 or EC-SOD) is like SOD1 in that it contains Cu and Zn ions, however it is distinct in that it is a homotetramer, with a mass of 30 kDa and it exists only in the extra-cellular space (7). SOD3 can also be distinguished by its heparin-binding capacity (1). Studies have shown that in vitro, Cu-Zn SOD (SOD1) fibrils are transduced into cells and function as seeds to trigger the aggregation of endogenously expressed SOD1 (9).

## References

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3. Furukawa Y., O'Halloran T. (2006). Antioxidants & Redox Signaling. Vol 8, No 5,6.
4. Gao B., et al. (2003). Am J Physiol Lung Cell Mol Physiol 284: L917-L925.
5. Hassan H.M. (1988). Free Radical Biol. Med. 5: 377-385.
6. Kurobe N., et al. (1990) Biomedical Research. 11: 187-194
7. Wispe J.R., et al. (1989) BBA. 994: 30-36.
8. Xiao-Hong Liu., et al. (1993) Brain Research. 625: 29-37. 9. Furukawa Y., et al. (2013) FEBS 587(16): 2500-2505.

## Product Images



TEM of Human Recombinant Superoxide dismutase Protein Preformed Fibrils (SPR-470)

## Product Citations (0)

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Currently there are no citations for this product.

## Reviews

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There are no reviews yet.

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