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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# Anti-SOD (Cu/Zn) Antibody

Rabbit Anti-Human SOD (Cu/Zn) Polyclonal  
Catalog No. SPC-116



Discovery through partnership | Excellence through quality

## Overview

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### Product Name

SOD (Cu/Zn) Antibody

### Description

Rabbit Anti-Human SOD (Cu/Zn) Polyclonal

### Species Reactivity

Dog, Human, Monkey, Mouse, Rat, African clawed frog (*Xenopus laevis*), Bovine, Butterfly (*Ops melastigma*), Coral (Anthozoa), Fish, Hamster, Insect, Invertebrate, Mollusk, Mussel (*Perna viridis*), Pig, Rabbit, Sheep

### Applications

WB, IHC, IP, ELISA

### Antibody Dilution

WB (1:5000), IHC (1:100); optimal dilutions for assays should be determined by the user.

### Host Species

Rabbit

### Immunogen Species

Human

### Immunogen

Human Cu/Zn SOD

### Concentration

1 mg/ml

### Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

## Properties

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### Storage Buffer

PBS pH7.0, 50% glycerol, 0.09% sodium azide

### Storage Temperature

-20°C

### Shipping Temperature

Blue Ice or 4°C

### Purification

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Protein A purified

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### Clonality

Polyclonal

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### Specificity

Detects ~23kDa (human) and ~19kDa (other species).

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### Cite This Product

Rabbit Anti-Human SOD1 Polyclonal (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPC-116)

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### Certificate Of Analysis

0.2 µg/ml of SPC-116 was sufficient for detection of Cu/Zn SOD in 20 µg of HeLa cell lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:AP as the secondary antibody.

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## Biological Description

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### Alternative Names

Superoxide dismutase1 Antibody, ALS1 Antibody, IPOA Antibody, SOD1 Antibody, SOD2 Antibody, SODC Antibody

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### Research Areas

Cancer, ALS Disease, Cell Signaling, Chaperones, Neurodegeneration, Neuroscience, Oxidative Stress, Trafficking

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### Cellular Localization

Cytoplasm

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### Accession Number

NP\_000445.1

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### Gene ID

6647

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### Swiss Prot

P00441

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### 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).

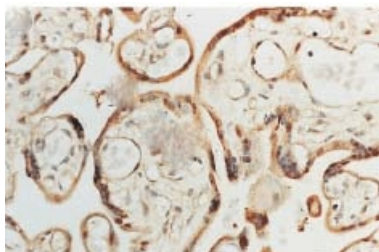
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### References

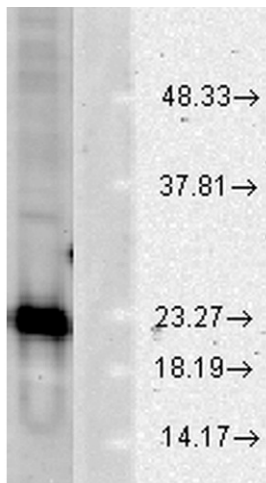
1. Adachi T., et al. (1992). Clin. Chim. Acta. 212: 89-102.
2. Barrister J.V., et al. (1987). Crit. Rev. Biochem. 22:111-180.
3. Furukawa Y., OHalloran T. (2006). Antioxidants & Redo Signaling. Vol 8, No 5,6.
4. Gao B., et al. (2003). Am J Physiol Lung Cell Mol Physiol 284: L917-L925.
5. Hassan H.M. (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.

## Product Images

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Immunohistochemistry analysis using Rabbit Anti-SOD1 Polyclonal Antibody (SPC-116). Tissue: Placenta. Species: Human. Primary Antibody: Rabbit Anti-SOD1 Polyclonal Antibody (SPC-116) at 1:100. Courtesy of: Courtesy of Joan Telfer, University of Glasgow.



Western blot analysis of Human Cell line lysates showing detection of SOD1 protein using Rabbit Anti-SOD1 Polyclonal Antibody (SPC-116). Load: 15 µg protein. Block: 1.5% BSA. Primary Antibody: Rabbit Anti-SOD1 Polyclonal Antibody (SPC-116) at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.

## Product Citations (5)

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### Western Blot

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**Differential proteomic responses in hepatopancreas and adductor muscles of the green-lipped mussel *Perna viridis* to stresses induced by cadmium and hydrogen peroxide.**

Leung, P.T.Y., Wang, Y., Mak, S.S.T. and Leung, K. M.Y. (2011) *Aquat Toxicol.* 105 (1-2): 49-61.

**PubMed ID:** 21684241 **Reactivity:** *Perna viridis* (Asian green mussel) **Applications:** Western Blot

**Ischemic conditioning by short periods of reperfusion attenuates renal ischemia/reperfusion induced apoptosis and autophagy in the rat.**

Wu, H., Hsiao, T., Chien, C., and Lai, M. (2009) *J Biomed Sci.* 16 (19).

**PubMed ID:** 19272187 **Reactivity:** Rat **Applications:** Western Blot

**Sesamin modulates tyrosine hydroxylase, superoxide dismutase, catalase, inducible NO synthase and interleukin-6 expression in dopaminergic cells under MPP<sup>+</sup>-induced oxidative stress.**

Lahaie-Collins, V., Bournival, J., Plouffe, M., Carange, J. and Matinoli, M.G. (2008) *Oxid Med Cell Longev.* 1 (1): 54-62.

**PubMed ID:** 19794909 **Reactivity:** Rat **Applications:** Western Blot

### Other Citations

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**Toxicities of nano zinc oxide to five marine organisms: influences of aggregate size and ion solubility.**

Wong, S.W., Leung, P.T., Djuriscic, A.B. and Leung, K.M. (2010) *Anal Bioanal Chem.* 396 (2): 609-618.

**PubMed ID:** 19902187 **Reactivity:** Fish (*O. melastigma*) **Applications:** Western Blot

**Sialic Acid Reduces Acute Endotoxemia-Induced Liver Dysfunction in the Rat.**

Ho, C., Hsu, S., Yang, C., Lee, Y. and Chien, C. (2009) Shock. 32 (2): 228-235.

**PubMed ID:** 19060786    **Reactivity:** Rat    **Applications:** Western Blot

**Reviews**

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Based on validation through cited publications.



**StressMarq Biosciences**  
June 15, 2016: