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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-SOD (Cu/Zn) Antibody

Rabbit Anti-Rat SOD (Cu/Zn) Polyclonal
Catalog No. SPC-115

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

SOD (Cu/Zn) Antibody

Description

Rabbit Anti-Rat SOD (Cu/Zn) Polyclonal

Species Reactivity

Human, Mouse, Rat, Bovine

Applications

WB, IHC, ICC/IF, IP, ELISA

Antibody Dilution

WB (1:2000), ICC/IF (1:120); optimal dilutions for assays should be determined by the user.

Host Species

Rabbit

Immunogen Species

Rat

Immunogen

Rat 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

Storage Buffer

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

Storage Temperature

-20ºC

Shipping Temperature

Blue Ice or 4ºC

Purification

Protein A purified

Clonality

Polyclonal

Specificity

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

Cite This Product

Rabbit Anti-Rat SOD1 Polyclonal (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPC-115)

Certificate Of Analysis

0.5 µg/ml of SPC-115 was sufficient for detection of Cu/Zn SOD in 20 µg of rat brain tissue extract by colorimetric immunoblot analysis using Goat anti-rabbit IgG:AP as the secondary antibody.

Biological Description

Alternative Names

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

Research Areas

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

Cellular Localization

Cytoplasm

Accession Number

NP_058746.1

Gene ID

24786

Swiss Prot

P07632

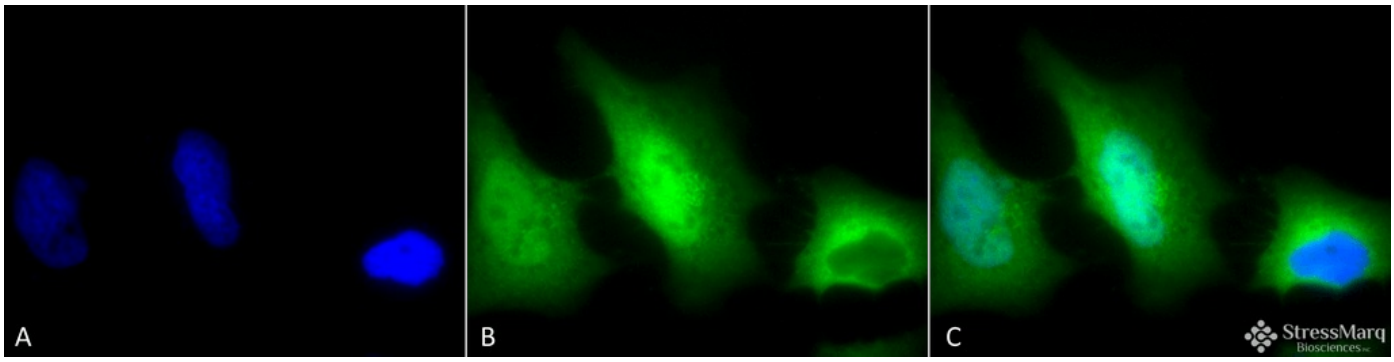
Scientific Background

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 $O2^{-}$ to O2 and H2O2, which are then metabolized to H2O and O2 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).

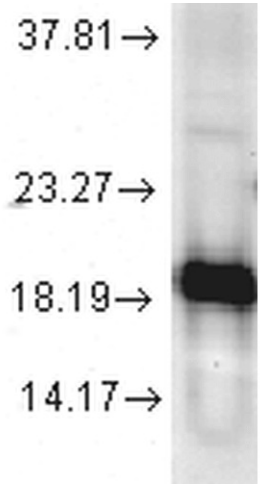
References

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.
8. Xiao-Hong Liu., et al. (1993) Brain Research. 625: 29-37.

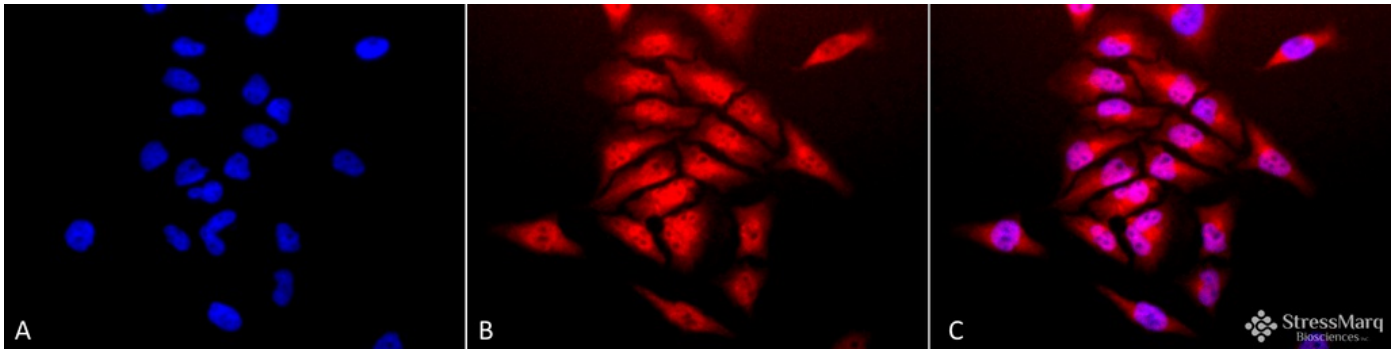
Product Images



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (Cu/Zn) Polyclonal Antibody (SPC-115). Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Cu/Zn) Polyclonal Antibody (SPC-115) at 1:120 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Cytoplasm. Nucleus. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (Cu/Zn) Antibody. (C) Composite.



Western blot analysis of Human Cell line lysates showing detection of SOD1 protein using Rabbit Anti-SOD1 Polyclonal Antibody (SPC-115). Load: 15 µg protein. Block: 1.5% BSA. Primary Antibody: Rabbit Anti-SOD1 Polyclonal Antibody (SPC-115) at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-SOD (Cu/Zn) Polyclonal Antibody (SPC-115). Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Cu/Zn) Polyclonal Antibody (SPC-115) at 1:120 for 12 hours at 4°C. Secondary Antibody: APC Goat Anti-Rabbit (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Cytoplasm. Nucleus. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (Cu/Zn) Antibody. (C) Composite.

Product Citations (3)

Western Blot

Green tea extract supplementation ameliorates CCl4-induced hepatic oxidative stress, fibrosis, and acute-phase protein expression in rat.

Hung, G. et al. (2012) J Formos Med Assoc. 111 (10): 550-559.

PubMed ID: 23089690 **Reactivity:** Rat **Applications:** Western Blot

Increased lipid metabolism and cell turnover of MiaPaCa2 cells induced by high-fat diet in an orthotopic system.

Wang, F., Kumagai-Braesch, M., Herrington M.K., Larsson, J. and Permert, J. (2009) Metabolism. 58 (8): 1131-1136.

PubMed ID: 19493551 **Reactivity:** Mouse **Applications:** Western Blot

Other Citations

Attenuation of long-term Rhodiola rosea supplementation on exhaustive swimming-evoked oxidative stress in the rat.

Huang, S.C., Lee, F.T., Kuo, T.Y., Yang, J.H. and Chien, C.T. (2009) Chin J Physiol. 52 (5): 316-324.

PubMed ID: 20034236 **Reactivity:** Rat **Applications:** Western Blot

Reviews

Based on validation through cited publications.

★★★★★

StressMarq Biosciences
June 15, 2016: