

#### SOD (Mn) Antibody

Catalog # ASM10382

# **Specification**

# SOD (Mn) Antibody - Product Information

Application WB, IHC, IP
Primary Accession P04179
Other Accession NP\_000627.2

Host Rabbit

Reactivity

Human, Mouse, Rat, Rabbit, Hamster,
Monkey, Pig, Chicken, Bovine, Xenopus,

Dog, Sheep, Guinea Pig

Clonality Polyclonal HRP

Description

Rabbit Anti-Human SOD (Mn) Polyclonal

Target/Specificity
Detects ~25kDa.

**Other Names** 

Manganese SOD Antibody, IPO B Antibody, Mn SOD Antibody, SOD2 Antibody

Immunogen Human Mn SOD

**Purification**Protein A Purified

Storage -20°C

**Storage Buffer** 

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature Blue Ice or 4°C

**Certificate of Analysis** 

 $0.2 \mu g/ml$  of SPC-118 was sufficient for detection of Mn SOD in 20  $\mu g$  of rat brain tissue extract by colorimetric immunoblot analysis using Goat anti-mouse IgG:AP as the secondary antibody.

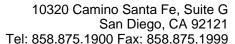
**Cellular Localization** 

Mitochondrion | Mitochondrion Matrix

### SOD (Mn) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry



abcepta

- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

#### SOD (Mn) Antibody - Images

### SOD (Mn) Antibody - 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<sup>-</sup> 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).

## **SOD (Mn) Antibody - References**

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- 2. Barrister J.V., et al. (1987). Crit. Rev. Biochem. 22:111-180.
- 3. Furukawa Y., O'Halloran 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.