

**Anti-SOD2 Antibody**  
Catalog # ABO11083**Specification**

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**Anti-SOD2 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P04179</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Superoxide dismutase[Mn], mitochondrial(SOD2) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-SOD2 Antibody - Additional Information**

**Gene ID** 6648

**Other Names**

Superoxide dismutase [Mn], mitochondrial, 1.15.1.1, SOD2

**Calculated MW**

24722 MW KDa

**Application Details**

Immunocytochemistry , 0.5-1 µg/ml, Human, Mouse, Rat<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Mitochondrion matrix.

**Protein Name**

Superoxide dismutase[Mn], mitochondrial

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg Na<sub>3</sub>N.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human SOD2(45-62aa QIMQLHHSKHHAAYVNNL), identical to the related mouse sequence and different from the related rat sequence by one amino acid.

**Purification**

Immunogen affinity purified.

### Cross Reactivity

No cross reactivity with other proteins

### Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

### Sequence Similarities

Belongs to the iron/manganese superoxide dismutase family.

## Anti-SOD2 Antibody - Protein Information

**Name** SOD2

### Function

Destroys superoxide anion radicals which are normally produced within the cells and which are toxic to biological systems.

### Cellular Location

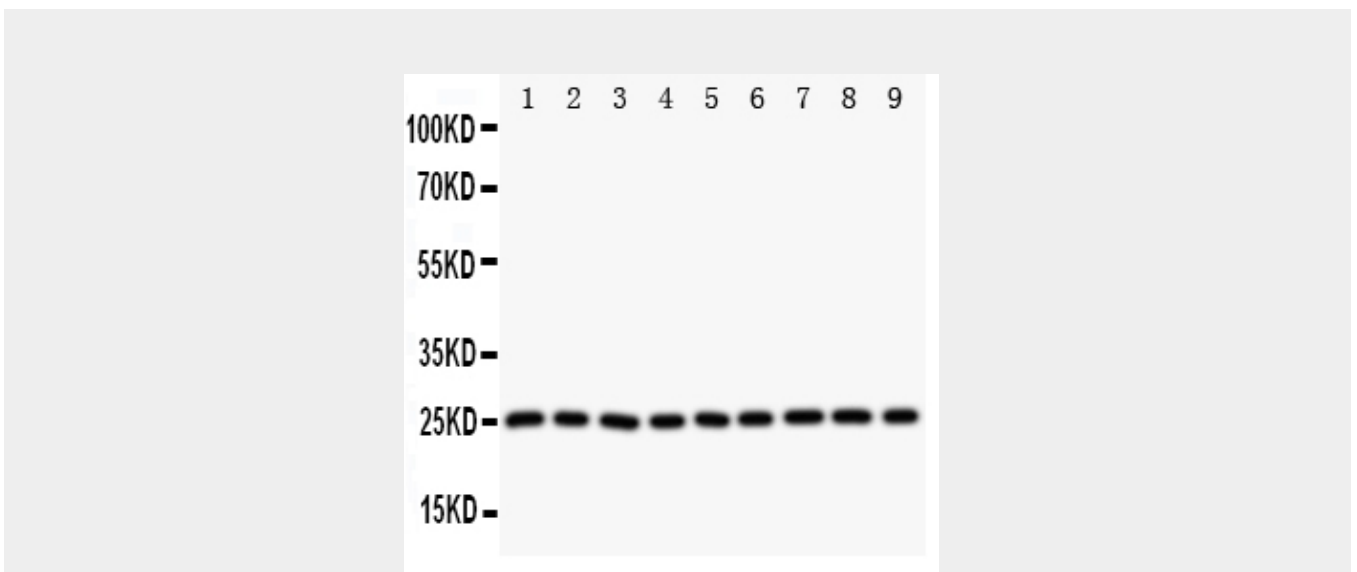
Mitochondrion matrix.

## Anti-SOD2 Antibody - Protocols

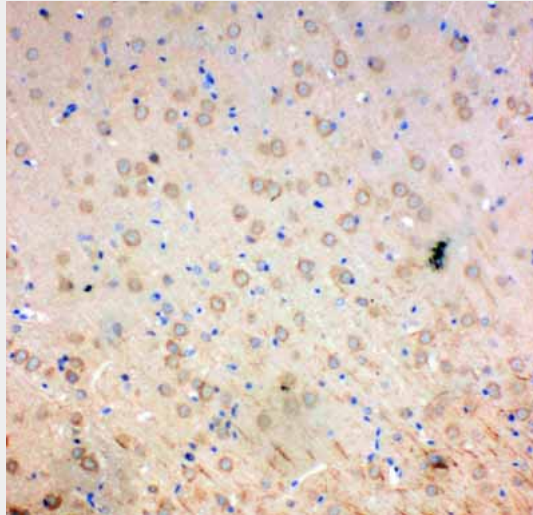
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

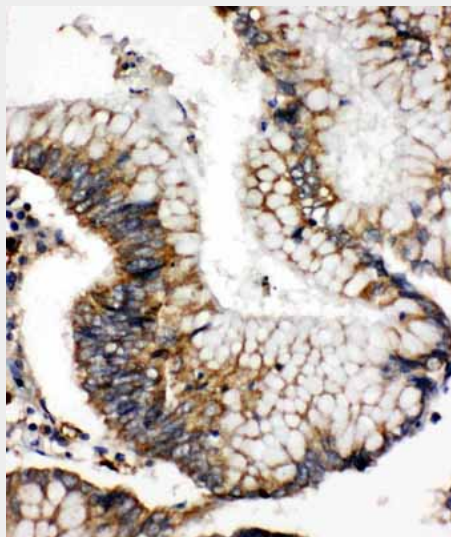
## Anti-SOD2 Antibody - Images



Anti-SOD2 antibody, ABO11083, Western blotting All lanes: Anti SOD2 (ABO11083) at 0.5ug/ml  
Lane 1: Rat Liver Tissue Lysate at 50ug  
Lane 2: Rat Intestine Tissue Lysate at 50ug  
Lane 3: Rat Lung Tissue Lysate at 50ug  
Lane 4: Rat Heart Tissue Lysate at 50ug  
Lane 5: SMMC Whole Cell Lysate at 40ug  
Lane 6: HELA Whole Cell Lysate at 40ug  
Lane 7: COLO320 Whole Cell Lysate at 40ug  
Lane 8: SW620 Whole Cell Lysate at 40ug  
Lane 9: A549 Whole Cell Lysate at 40ug  
Predicted bind size: 25KD  
Observed bind size: 25KD



Anti-SOD2 antibody, ABO11083, IHC(P) IHC(P): Rat Brain Tissue



Anti-SOD2 antibody, ABO11083, IHC(P) IHC(P): Human Intestinal Cancer Tissue

### **Anti-SOD2 Antibody - Background**

SOD2 (Superoxide Dismutase 2), also called IPO-B or MNSOD, is a mitochondrial matrix enzyme that scavenges oxygen radicals produced by the extensive oxidation-reduction and electron transport reactions occurring in mitochondria. This gene is a member of the iron/manganese superoxide dismutase family. Using a somatic cell hybrid panel containing different segments of chromosome 6, they demonstrated that SOD2 is located in the region 6q25.3-qter which, together with the FISH analysis, indicated that SOD2 is in the distal portion of 6q25. The SOD2 gene encodes an intramitochondrial free radical scavenging enzyme that is the first line of defense against superoxide produced as a byproduct of oxidative phosphorylation. Adeno-associated viral delivery of the human SOD2 gene resulted in suppression of optic nerve degeneration and rescue of retinal ganglion cells. The findings suggested that reactive oxygen species contributed to retinal cell death

and optic nerve damage in mice with complex I deficiency, and that expression of SOD2 attenuated the disease process.