

Anti-SOD2 Antibody
Catalog # ABO11083

Specification

Anti-SOD2 Antibody - Product Information

Application	WB, IHC
Primary Accession	P04179
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
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization

Mitochondrion matrix.

Protein Name

Superoxide dismutase[Mn], mitochondrial

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Thimerosal, 0.05mg Na₃N.

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

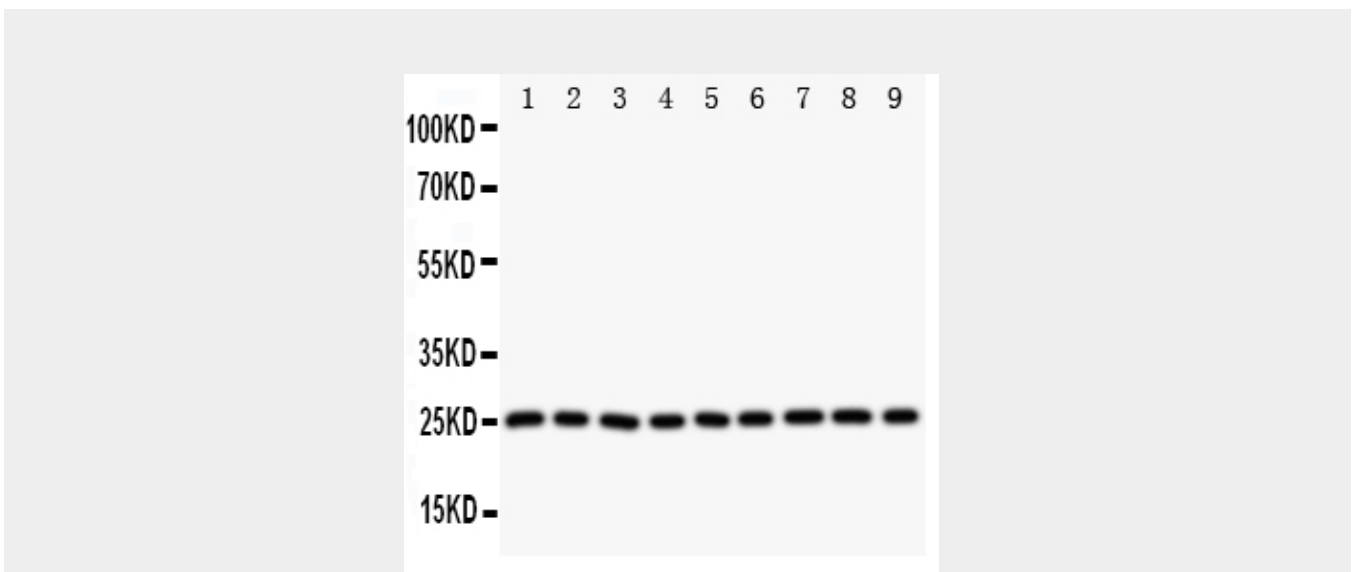
Mitochondrion matrix.

Anti-SOD2 Antibody - Protocols

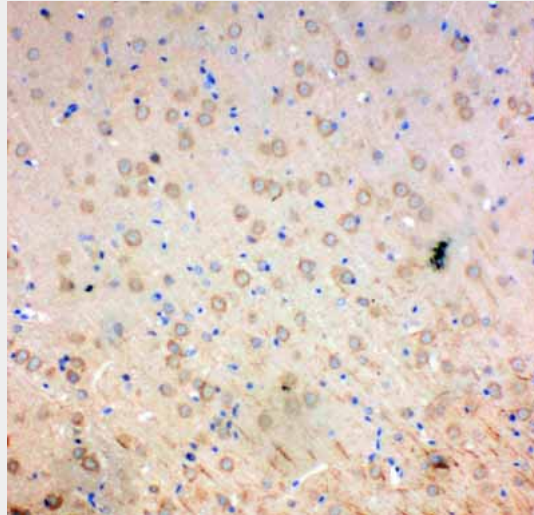
Provided below are standard protocols that you may find useful for product applications.

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

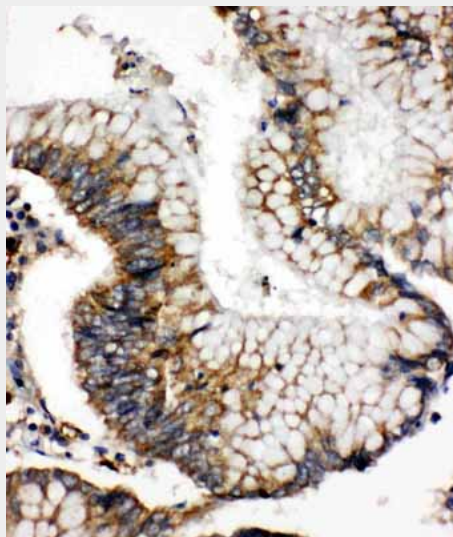
Anti-SOD2 Antibody - Images



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.