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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 NaN3.

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 r˚Constitution, 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.

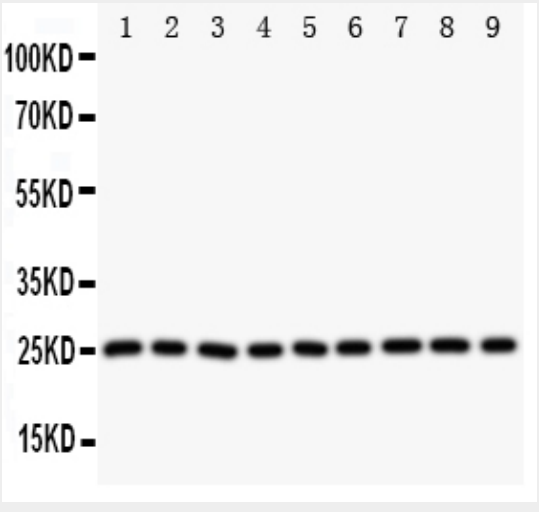
Cellular Location
Mitochondrion matrix.

Anti-SOD2 Antibody - Protocols

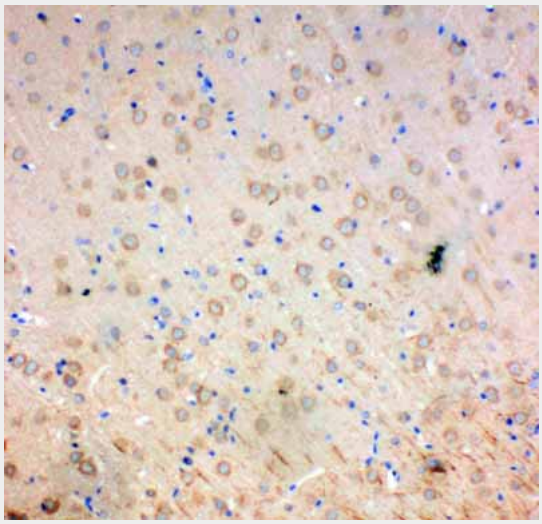
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

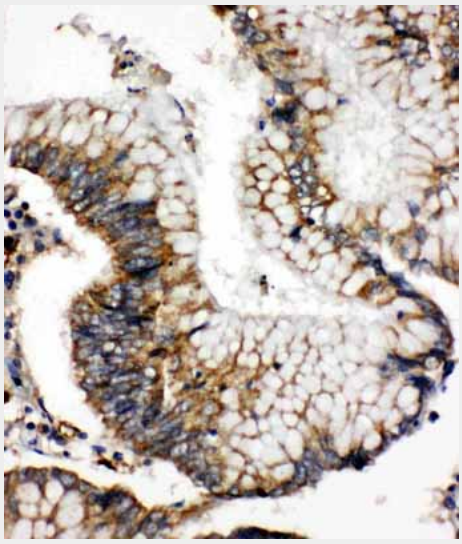
Anti-SOD2 Antibody - Images



Anti-SOD2 antibody, ABO11083, Western blottingAll lanes: Anti SOD2 (ABO11083) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 50ugLane 2: Rat Intestine Tissue Lysate at 50ugLane 3: Rat Lung Tissue Lysate at 50ugLane 4: Rat Heart Tissue Lysate at 50ugLane 5: SMMC Whole Cell Lysate at 40ugLane 6: HELA Whole Cell Lysate at 40ugLane 7: COLO320 Whole Cell Lysate at 40ugLane 8: SW620 Whole Cell Lysate at 40ugLane 9: A549 Whole Cell Lysate at 40ugPredicted bind size: 25KDObserved 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.