

## Basic Information

<b>Product Name</b>	Anti-SOD2 Antibody	
<b>Gene Name</b>	SOD2	
<b>Source</b>	Rabbit	
<b>Clonality</b>	Polyclonal	
<b>Isotype</b>	IgG	
<b>Species Reactivity</b>	human, mouse, rat	
<b>Tested Application</b>	WB, IHC, ICC/IF	
<b>Contents</b>	500 ug/ml antibody with PBS, 0.02% NaN <sub>3</sub> , 1 mg/ml BSA and 50% glycerol.	
<b>Immunogen</b>	A synthetic peptide corresponding to a sequence at the C-terminus of human SOD2, different from the related mouse sequence by one amino acid, and from the related rat sequence by four amino acids.	
<b>Concentration</b>	500 ug/ml	
<b>Purification</b>	Immunogen affinity purified.	
<b>Observed MW</b>	25 kDa	
<b>Dilution Ratios</b>	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 (Boiling the paraffin sections in 10mM citrate buffer, pH6.0, or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

## Storage

12 months from date of receipt, -20°C as supplied.

## Background Information

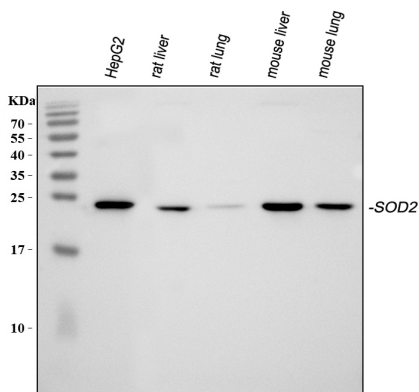
SOD2(Superoxide Dismutase 2), also called IPO-B or MNSOD, is a mitochondrial matrix enzyme that scavenges oxygen radicals produced by the extensive oxidation-reduction and electron transport reactions occurring in mitochondria. This gene is a member of the iron/manganese superoxide dismutase family. 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.

## Reference

Anti-SOD2 Antibody被引用在6文献中。

## Selected Validation Data



Western blot analysis of SOD2 using anti-SOD2 antibody (PB9442). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human HepG2 whole cell lysates,

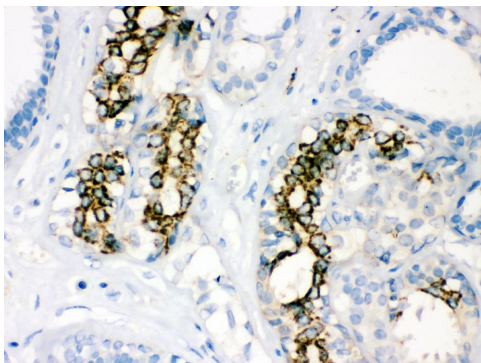
Lane 2: rat liver tissue lysates,

Lane 3: rat lung tissue lysates,

Lane 4: mouse liver tissue lysates,

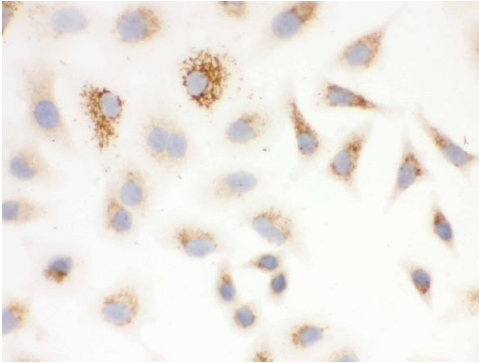
Lane 5: mouse lung tissue lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-SOD2 antigen affinity purified polyclonal antibody (PB9442) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for SOD2 at approximately 25 kDa. The expected band size for SOD2 is at 25 kDa.



IHC analysis of SOD2 using anti-SOD2 antibody (PB9442).

SOD2 was detected in a paraffin-embedded section of human mammary cancer tissue. The tissue section was incubated with rabbit anti-SOD2 Antibody (PB9442) at a dilution of 1:200 and developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB (Catalog # AR1027) as the chromogen.



ICC analysis of SOD2 using anti- SOD2 antibody (PB9442).

SOD2 was detected in an immunocytochemical section of A549 cells. The section was incubated with rabbit anti-SOD2 Antibody (PB9442) at a dilution of 1:100. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.