

anti-Human, Mouse SOD2 Polyclonal Antibody | anti-SOD2 antibody

Anti-SOD2 Antibody

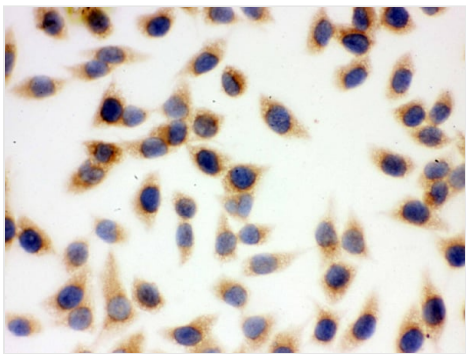
CATALOG #	REACTIVITY	APPLICATIONS
AAA46385	Human, Mouse	Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

SOD2; Polyclonal Antibody; Anti-SOD2 Antibody; Superoxide dismutase [Mn]; Indophenoloxidase B; IPO B; IPOB; Manganese containing superoxide dismutase; Manganese SOD; Manganese superoxide dismutase; Mangano superoxide dismutase; Mn SOD; Mn superoxide dismutase; MNSOD; MVCD6; SOD 2; SOD-2; SODM_HUMAN; Superoxide dismutase [Mn] mitochondrial; Superoxide dismutase [Mn] mitochondrial precursor; mitochondrial; Superoxide dismutase 2 mitochondrial; superoxide dismutase 2; anti-SOD2 antibody

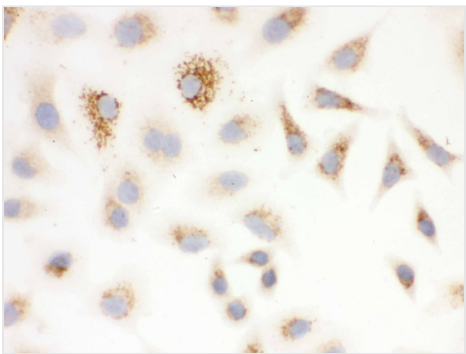
PRODUCT SPECIFICATIONS

Reactivity	Human, Mouse
Clonality	Polyclonal
Purity/Purification	Immunogen Affinity Purified
Form/Format	Lyophilized. Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Na ₃ N.
Sequence Length	222
Applicable Applications for anti-SOD2 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human SOD2 (192-222aa QYKNVRPDYLKAIWNVINWENVTERYMACKK), different from the related mouse sequence by one amino acid, and from the related rat sequence by four amino acids.
Ig Type	Rabbit IgG
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Preparation and Storage	At -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquoted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



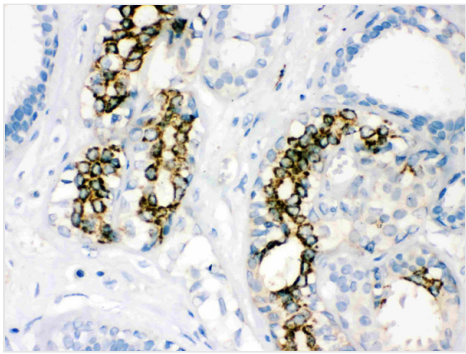
IHC (Immunohistochemistry)

Figure 4. IHC analysis of SOD2 using anti-SOD2 antibody (AAA46385).SOD2 was detected in immunocytochemical section of SMMC-7721 cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-SOD2 Antibody (AAA46385) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



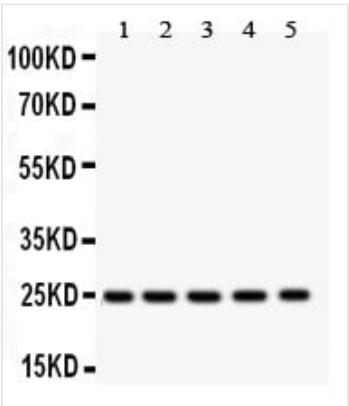
IHC (Immunohistochemistry)

Figure 3. IHC analysis of SOD2 using anti-SOD2 antibody (AAA46385).SOD2 was detected in immunocytochemical section of A549 cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-SOD2 Antibody (AAA46385) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of SOD2 using anti-SOD2 antibody (AAA46385).SOD2 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-SOD2 Antibody (AAA46385) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 1. Western blot analysis of SOD2 using anti-SOD2 antibody (AAA46385).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: Mouse Testis Tissue LysateLane 2: Mouse Lung Tissue LysateLane 3: Mouse Cardiac Muscle Tissue LysateLane 4: Mouse Liver Tissue LysateLane 5: HEPG2 Whole Cell LysateAfter Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SOD2 antigen affinity purified polyclonal antibody at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for SOD2 at approximately 25KD. The expected band size for SOD2 is at 74KD.

ADDITIONAL INFORMATION

Related Product Information for anti-SOD2 antibody	Description: Rabbit IgG polyclonal antibody for Superoxide dismutase [Mn], mitochondrial(SOD2) detection. Tested with WB, IHC-P in Human;Mouse. 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.
References	1. Bastaki, M., Huen, K., Manzanillo, P., Chande, N., Chen, C., Balmes, J. R., Tager, I. B., Holland, N. Genotype-activity relationship for Mn-superoxide dismutase, glutathione peroxidase 1 and catalase in humans. Pharmacogenet. Genomics 16: 279-286, 2006. 2. Creagan, R., Tischfield, J., Ricciuti, F., Ruddle, F. H. Chromosome assignments of genes in man using mouse-human somatic cell hybrids: mitochondrial superoxide dismutase (indophenol oxidase-B, tetrameric) to chromosome 6. Humangenetik 20: 203-209, 1973. 3. Hiroi, S., Harada, H., Nishi, H., Satoh, M., Nagai, R., Kimura, A. Polymorphisms in the SOD2 and HLA-DRB1 genes are associated with nonfamilial idiopathic dilated cardiomyopathy in Japanese. Biochem. Biophys. Res. Commun. 261: 332-339, 1999.

NCBI AND UNIPROT INFORMATION

NCBI GI #	67782305
NCBI GeneID	6648
NCBI Accession #	NP_000627.2
NCBI GenBank Nucleotide #	NM_000636.3
UniProt Accession #	P04179; P78434; Q16792; Q5TCM1; Q96EE6; Q9P2Z3; B2R7R1; B3KUK2; B4DL20; B4E3K9; E1P5A9
Molecular Weight	19,730 Da
NCBI Official Full Name	superoxide dismutase
NCBI Official Synonym Full Names	superoxide dismutase 2, mitochondrial
NCBI Official Symbol	SOD2
NCBI Official Synonym Symbols	IPOB; IPO-B; MNSOD; MVCD6; Mn-SOD
NCBI Protein Information	superoxide dismutase [Mn], mitochondrial
UniProt Protein Name	Superoxide dismutase [Mn], mitochondrial
UniProt Gene Name	SOD2
UniProt Entry Name	SODM_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/polyclonal/sod2-antibody-immunohistochemistry-western-blot-elisa/46385>