



Rabbit Anti-SOD2 antibody

SL20667R

Product Name:	SOD2
Chinese Name:	超氧化物歧化酶2抗体
Alias:	IPO B; Manganese SOD; Superoxide Dismutase 2; Manganese superoxide dismutase; Mn SOD; MNSOD; SOD 2; SOD-2; SOD2; Superoxide dismutase [Mn] mitochondrial; Superoxide dismutase [Mn] mitochondrial precursor; Superoxide dismutase 2 mitochondrial; SODM_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Rabbit,Sheep,
Applications:	IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1µg/Test (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	22kDa
Cellular localization:	cytoplasmicMitochondrion
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human SOD2:101-160/222
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	This gene is a member of the iron/manganese superoxide dismutase family. It encodes a mitochondrial protein that forms a homotetramer and binds one manganese ion per subunit. This protein binds to the superoxide byproducts of oxidative phosphorylation and converts them to hydrogen peroxide and diatomic oxygen. Mutations in this gene

have been associated with idiopathic cardiomyopathy (IDC), premature aging, sporadic motor neuron disease, and cancer. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jul 2008]

Function:

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

Subunit:

Homotetramer.

Subcellular Location:

Mitochondrion matrix.

Post-translational modifications:

Nitrated under oxidative stress. Nitration coupled with oxidation inhibits the catalytic activity.

Acetylation at Lys-122 decreases enzymatic activity. Deacetylated by SIRT3 upon exposure to ionizing radiations or after long fasting.

DISEASE:

Microvascular complications of diabetes 6 (MVCD6) [MIM:612634]: Pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis. Note=Disease susceptibility is associated with variations affecting the gene represented in this entry.

Similarity:

Belongs to the iron/manganese superoxide dismutase family.

SWISS:

P04179

Gene ID:

6648

Database links:

[Entrez Gene: 6648](#)Human

[Entrez Gene: 20656](#)Mouse

[Entrez Gene: 24787](#)Rat

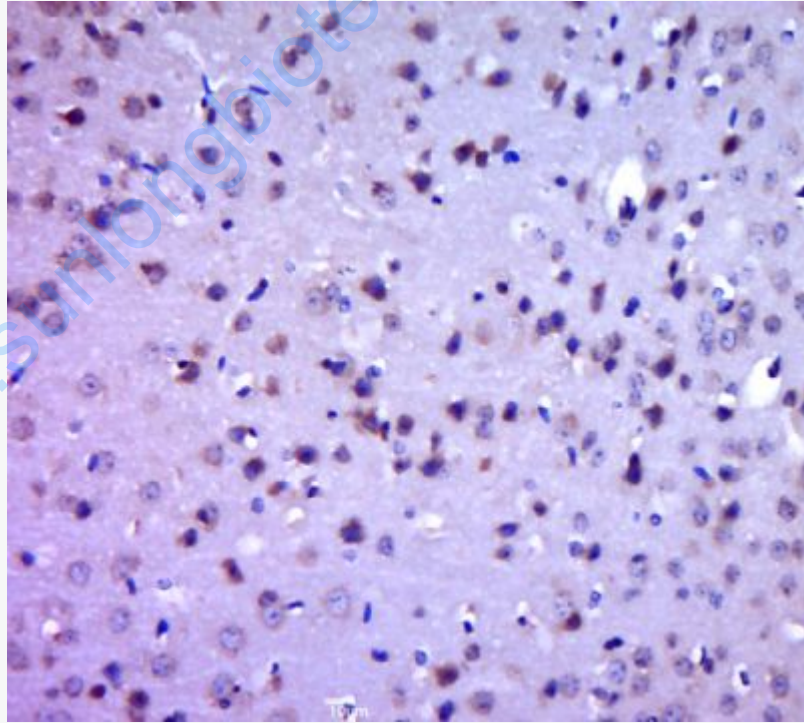
[Oimim: 147460](#)Human

[SwissProt: P41976](#)Cow
[SwissProt: P04179](#)Human
[SwissProt: P09671](#)Mouse
[SwissProt: P41982](#)Rabbit
[SwissProt: P07895](#)Rat
[Unigene: 487046](#)Human
[Unigene: 290876](#)Mouse
[Unigene: 10488](#)Rat

Important Note:

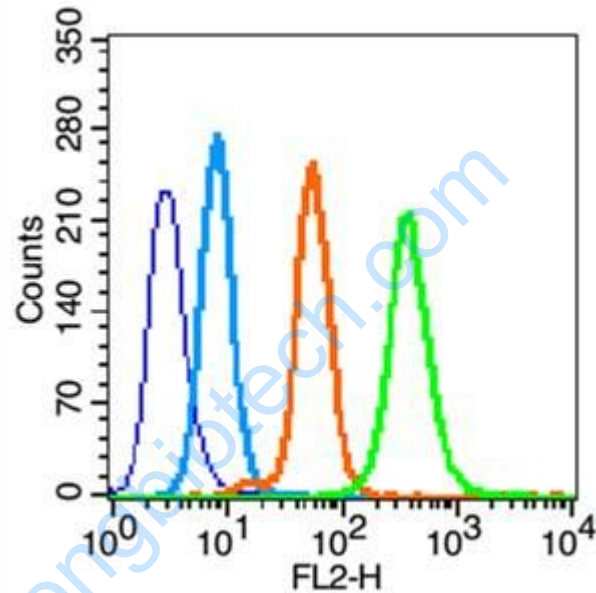
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Picture:



Paraformaldehyde-fixed, paraffin embedded (mouse brain tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at

37°C for 30min; Antibody incubation with (SOD2) Polyclonal Antibody, Unconjugated (SL20667R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Blank control (blue line): Hep G2 (fixed with 70% ethanol (Overnight at 4°C) and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature).

Primary Antibody (green line): Rabbit Anti-SOD2 antibody (SL20667R), Dilution: 0.2µg /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE, Dilution: 1µg /test.