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SOD1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8733c

Product Information

Application	WB, IHC-P, FC, IF, E
Primary Accession	P00441
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21395
Calculated MW	15936
Antigen Region	55-84

Additional Information

Gene ID	6647
Other Names	Superoxide dismutase [Cu-Zn], Superoxide dismutase 1, hSod1, SOD1
Target/Specificity	This SOD1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 55-84 amino acids from the Central region of human SOD1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SOD1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SOD1 (HGNC:11179)
Function	Destroys radicals which are normally produced within the cells and which are toxic to biological systems (PubMed:18948262, PubMed:24140062). Catalyzes the oxidation of hydrogen sulfide (H2S) to sulfate, playing an

	important role in detoxifying H2S and limiting the accumulation of reactive sulfur species (RSS) such as persulfides and polysulfides (PubMed:36630448).
Cellular Location	Cytoplasm. Nucleus. Note=Predominantly cytoplasmic; the pathogenic variants ALS1 Arg-86 and Ala-94 gradually aggregates and accumulates in mitochondria.

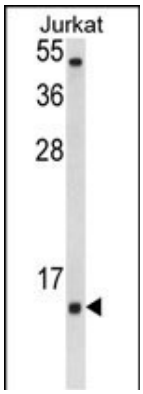
Background

SOD1 binds copper and zinc ions and is one of two isozymes responsible for destroying free superoxide radicals in the body. This isozyme is a soluble cytoplasmic protein, acting as a homodimer to convert naturally-occuring but harmful superoxide radicals to molecular oxygen and hydrogen peroxide. The other isozyme is a mitochondrial protein.

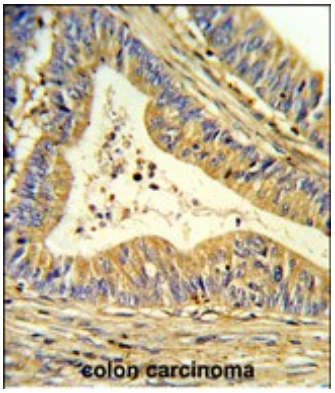
References

Crapo,J.D., et.al., Proc. Natl. Acad. Sci. U.S.A. 89 (21), 10405-10409 (1992)

Images

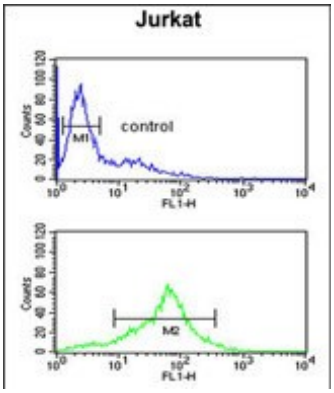


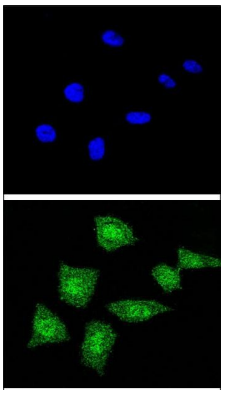
Western blot analysis of SOD1 Antibody (Center) (Cat. #AP8733c) in Jurkat cell line lysates (35ug/lane). SOD1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human colon carcinoma reacted with SOD1 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

SOD1 Antibody (Center) (Cat. #AP8733c) flow cytometric analysis of Jurkat cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.





Confocal immunofluorescent analysis of SOD1 Antibody (Center) (Cat. #AP8733c) with 293 cell followed by Alexa Fluor® 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).

Citations

- Effects of MUL1 and PARKIN on the circadian clock, brain and behaviour in Drosophila Parkinson's disease models.
- Glutathione-dependent and -independent oxidative stress-control mechanisms distinguish normal human mammary epithelial cell subsets.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.