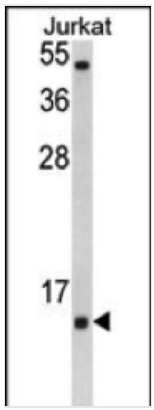
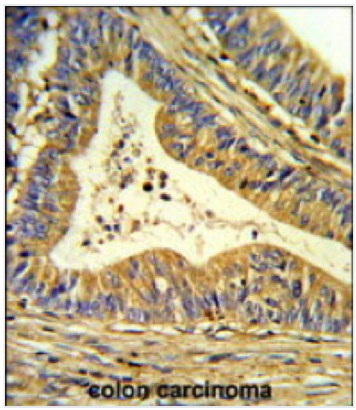
SOD1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

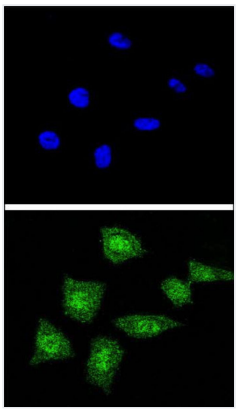
Product Name	SOD1, Polyclonal Antibody
Full Product Name	SOD1, ID (Superoxide Dismutase [Cu-Zn]) (MaxLight 405)
Product Gene Name	anti-SOD1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight405.
Purity/Purification	Purified by Immunoaffinity chromatography.
Specificity	Recognizes human SOD1.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight405 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	15,936 Da
OMIM	phenotype 147450
3D Structure	ModBase 3D Structure for P00441
Immunogen	KLH-conjugated synthetic peptide mapping to a fragment of residues within aa62-92 of human SOD1. Uni Port: P00441; NP_000445.1
Conjugate	MaxLight405
Note	Preservative Free
Product Categories/Family for anti-SOD1 antibody	Antibodies; Superoxide Dismutase
Applications Tested/Suitable for anti-SOD1 antibody	Flow Cytometry (FC/FACS), FLISA, Immunofluorescence (IF), Immunohistochemistry (IHC), Western Blot (WB)
Application Notes for anti-SOD1 antibody	FC/FACS: 1:10-50 FLISA: 1:1,000 IF: 1:10-50 IHC: 1:50~100 WB: 1:100-1:500 Applications are based on unconjugated antibody.
Related Product Information for anti-SOD1 antibody	MBS6501663 is an antibody targeting SOD1. Also known as SOD1, ID (Superoxide Dismutase [Cu-Zn]) (MaxLight 405). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-SOD1 antibody	1. Crapo, J.D., et.al., Proc. Natl. Acad. Sci. USA 89(21), 10405-10409 (1992).
Other Notes	Small volumes of anti-SOD1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



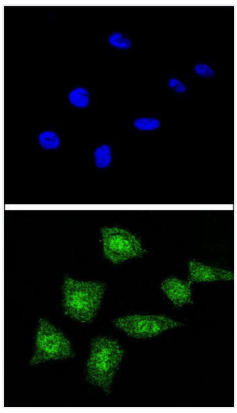
Western Blot (WB) of anti-SOD1 antibody
Western blot analysis of Jurkat cell line lysates (35ug/lane) usinfgMBS627647. SOD1 (arrow) was detected using the purified Pab.



Immunohistochemistry (IHC) of anti-SOD1 antibody
Formalin-fixed and paraffin-embedded human colon carcinoma reacted using MBS627647 which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry.



Immunofluorescence (IF) of anti-SOD1 antibody
Confocal immunofluorescent analysis of 293 cell usingMBS627647, followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).



Flow Cytometry (FC/FACS) of anti-SOD1 antibody
Flow Cytometry analysis of Jurkat cells (bottom histogram) using MBS627647 compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SOD1. It may not necessarily be applicable to this product.

NCBI GI #	4507149
NCBI GeneID	6647
NCBI Accession #	NP_000445.1
UniProt Primary Accession #	P00441
UniProt Secondary Accession #	Q16669; Q16711; Q16838; Q16839; Q16840; Q6NR85; A6NHJ0; D3DSE4
UniProt Related Accession #	P00441
GenBank Nucleotide #	NM_000454.4
NCBI Official Full Name	superoxide dismutase
NCBI Official Synonym Full Names	superoxide dismutase 1, soluble
NCBI Official Symbol	SOD1
NCBI Official Synonym Symbols	ALS; SOD; ALS1; IPOA; hSod1; HEL-S-44; homodimer
UniProt Protein Name	Superoxide dismutase [Cu-Zn]
UniProt Synonym Protein Names	Superoxide dismutase 1; hSod1

Protein Family	Superoxide dismutase
UniProt Gene Name	SOD1
UniProt Synonym Gene Names	hSod1
UniProt Entry Name	SODC_HUMAN
NCBI Protein Information	superoxide dismutase [Cu-Zn]; superoxide dismutase [Cu-Zn]; Cu/Zn superoxide dismutase; SOD, soluble; epididymis secretory protein Li 44; indophenoloxidase A; superoxide dismutase, cystolic
NCBI Summary for SOD1	The protein encoded by this gene binds copper and zinc ions and is one of two isozymes responsible for destroying free superoxide radicals in the body. The encoded 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. Mutations in this gene have been implicated as causes of familial amyotrophic lateral sclerosis. Rare transcript variants have been reported for this gene. [provided by RefSeq, Jul 2008]
UniProt Comments for SOD1	SOD1: Destroys radicals which are normally produced within the cells and which are toxic to biological systems. Homodimer; non-disulfide linked. Homodimerization may take place via the ditryptophan cross-link at Trp-33. The pathogenic variants ALS1 Arg-38, Arg-47, Arg-86 and Ala-94 interact with RNF19A, whereas wild-type protein does not. The pathogenic variants ALS1 Arg-86 and Ala-94 interact with MARCH5, whereas wild-type protein does not. Belongs to the Cu-Zn superoxide dismutase family. Protein type: Oxidoreductase; Mitochondrial; EC 1.15.1.1; Nuclear receptor co-regulator; Apoptosis Chromosomal Location of Human Ortholog: 21q22.11 Cellular Component: dendrite cytoplasm; extracellular space; protein complex; mitochondrion; extracellular region; mitochondrial intermembrane space; cytosol; nucleoplasm; extracellular matrix; cell soma; mitochondrial matrix; cytoplasm; plasma membrane; peroxisome; cytoplasmic vesicle; nucleus Molecular Function: identical protein binding; protein binding; protein homodimerization activity; copper ion binding; zinc ion binding; chaperone binding; superoxide dismutase activity; Rac GTPase binding; protein phosphatase 2B binding Biological Process: positive regulation of catalytic activity; activation of MAPK activity; positive regulation of apoptosis; cellular iron ion homeostasis; myeloid cell homeostasis; retrograde axon cargo transport; response to antibiotic; muscle maintenance; retinal homeostasis; glutathione metabolic process; regulation of mitochondrial membrane potential; neurofilament cytoskeleton organization and biogenesis; positive regulation of superoxide release; negative regulation of neuron apoptosis; placenta development; positive regulation of cytokine production; response to drug; platelet activation; cell aging; regulation of organ growth; transmission of nerve impulse; response to reactive oxygen species; response to ethanol; heart contraction; response to heat; superoxide release; relaxation of vascular smooth muscle; removal of superoxide radicals; locomotory behavior; response to organic substance; sensory perception of sound; platelet degranulation; ovarian follicle development; regulation of blood pressure; response to axon injury; auditory receptor cell stereocilium organization and biogenesis; anterograde axon cargo transport; negative regulation of cholesterol biosynthetic process; response to nutrient levels; response to superoxide; thymus development; regulation of T cell differentiation in the thymus; response to amphetamine; superoxide metabolic process; myelin maintenance in the peripheral nervous system; regulation of multicellular organism growth; response to hydrogen peroxide; response to copper ion; spermatogenesis; regulation of protein kinase activity; blood coagulation; embryo implantation; hydrogen peroxide biosynthetic process Disease: Amyotrophic Lateral Sclerosis 1
Research Articles on SOD1	**1.** Its mutation results in a predominantly lower motor neuron disease.
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