Product Datasheet

SOD2/Mn-SOD Antibody - BSA Free
NB100-1992SS

Unit Size: 0.025 mg

Store at -20C. Avoid freeze-thaw cycles.

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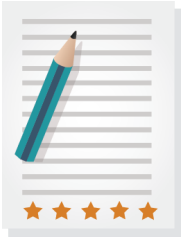
Updated 2/21/2025 v.20.1



NB100-1992SS

SOD2/Mn-SOD Antibody - BSA Free

Product Information

Unit Size	0.025 mg
Concentration	1.0 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS (pH 7.4), 50% Glycerol

Product Description

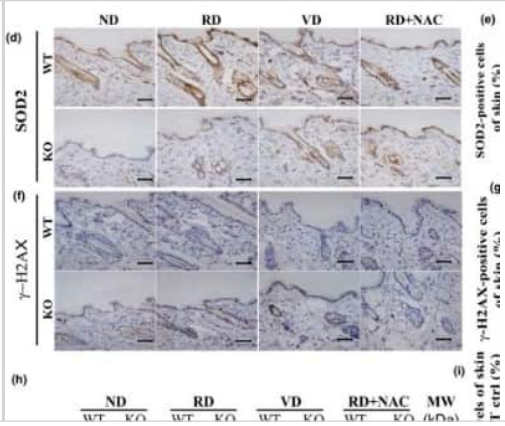
Host	Rabbit
Gene ID	6648
Gene Symbol	SOD2
Species	Human, Mouse, Rat, Porcine, Bovine, Canine, Chicken, Drosophila, Guinea Pig, Goat, Hamster, Monkey, Rabbit, Sheep, Squirrel, Xenopus
Reactivity Notes	Goat reactivity reported in scientific literature (PMID: 28797922). Reacts with Ciona intestinalis (Sea squirt).
Specificity/Sensitivity	Detects 25 kDa protein, corresponding to the molecular mass of Mn superoxide dismutase (SOD) on SDS-PAGE immunoblots.
Immunogen	Recombinant Rat Mn SOD Protein

Product Application Details

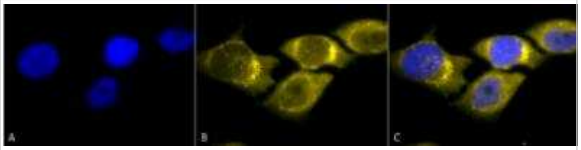
Applications	Western Blot, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:5000, ELISA 1:100-1:2000, Immunohistochemistry 1:100, Immunocytochemistry/ Immunofluorescence 1:120, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:10-1:500

Images

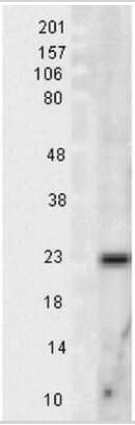
Immunohistochemistry: SOD2/Mn-SOD Antibody [NB100-1992] - The effects of a high calcium/phosphate diet, of 1,25(OH)2D3, and of antioxidant supplementation on oxidative stress, DNA damage, and protein expression of oncogenes and tumor suppressive genes in 1alpha (OH)ase -/- mice. Mice from each group were treated as described in Figure 1. Representative micrographs of skin sections stained immunohistochemically for SOD2 and gamma-H2AX. Scale bars represent 50 um. Image collected and cropped by CiteAb from the following publication (https://onlinelibrary.wiley.com/doi/abs/10.1111/acel.12951), licensed under a CC-BY license.



Immunocytochemistry/Immunofluorescence: SOD2/Mn-SOD Antibody [NB100-1992] - Analysis using Rabbit Anti-SOD (Mn) Polyclonal Antibody. Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Mn) Polyclonal Antibody at 1:120 for 12 hours at 4 degrees C. Secondary Antibody: R-PE Goat Anti-Rabbit (yellow) at 1:200 for 120 min at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 120 min at RT. Localization: Mitochondrion matrix. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (Mn) Antibody. (C) Composite.

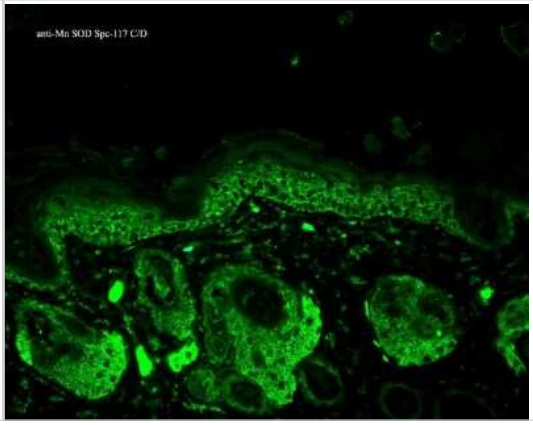


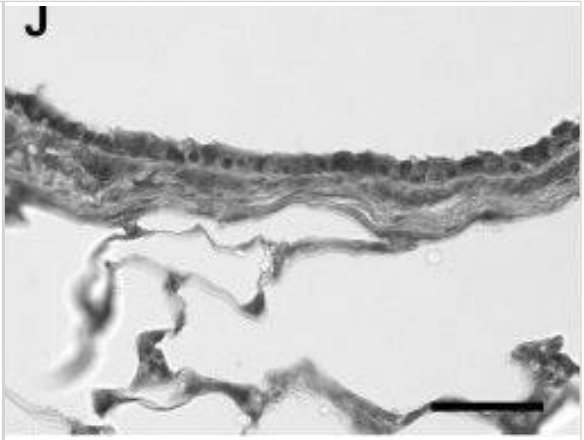
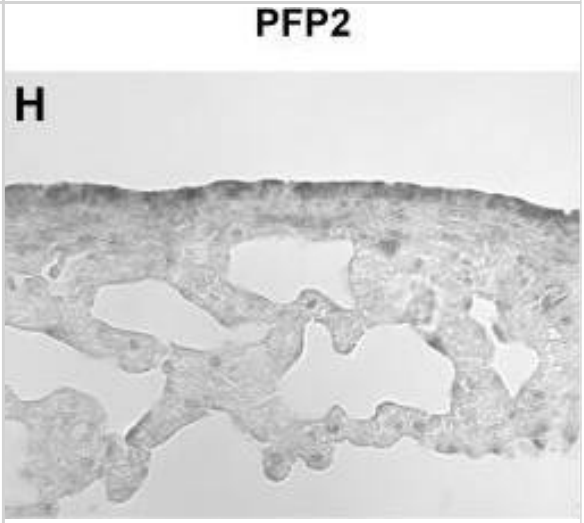
Western Blot: SOD2/Mn-SOD Antibody [NB100-1992] - Western blot analysis of Rat Tissue lysates showing detection of SOD2/Mn-SOD protein using Rabbit Anti-SOD2/Mn-SOD Polyclonal Antibody (NB100-1992). Load: 15 ugprotein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Rabbit Anti-SOD2/Mn-SOD Polyclonal Antibody (NB100-1992) at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.



Immunocytochemistry/Immunofluorescence: SOD2/Mn-SOD Antibody [NB100-1992] - Analysis using Rabbit Anti-SOD (Mn) Polyclonal Antibody. Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-SOD (Mn) Polyclonal Antibody at 1:120 for 12 hours at 4 degrees C. Secondary Antibody: APC Goat Anti-Rabbit (red) at 1:200 for 120 min at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 120 min at RT. Localization: Mitochondrion matrix. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-SOD (Mn) Antibody. (C) Composite.

Immunohistochemistry: SOD2/Mn-SOD Antibody [NB100-1992] - Immunohistochemistry analysis using Rabbit Anti-SOD2/Mn-SOD Polyclonal Antibody (NB100-1992). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative Solution. Primary Antibody: Rabbit Anti-SOD2/Mn-SOD Polyclonal Antibody (NB100-1992) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:50 for 1 hour at RT. Localization: Mitochondrion matrix.



Immunohistochemistry: SOD2/Mn-SOD Antibody [NB100-1992] - SOD2 mRNA & protein expression. RT-PCR: (A) SOD2 mRNA expression is higher in adults, & highest in the adult parenchyma. (B) No exposure effects on SOD2 mRNA were observed in neonates. (C) Adult SOD2 mRNA was decreased in PFP48. Data are presented as mean+SEM (n=5-7 rats/group, in each compartment), * significantly different compared to neonates in the same compartment, † significantly different compared to airways in the same age, ‡ significantly different compared to FA in the same compartment. Western blotting: (D) Scan of representative SOD2 & actin blots. (E) Neonatal whole lung SOD2 protein expression was unchanged with exposure, & (F) adult whole lung SOD2 protein trended upwards at PFP2, but was statistically insignificant. (G-J) Immunohistochemical localization of SOD2 in lung (n=6 rats/group). SOD2 protein was more abundant in adults compared to neonates, but no exposure specific differences were observed. Scale bar is 50 µm. Image collected & cropped by CiteAb from the following publication (https://particleandfibretoxicology.biomedcentral.com/articles/10.1186/1743-8977-10-34), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunohistochemistry: SOD2/Mn-SOD Antibody [NB100-1992] - SOD2 mRNA & protein expression. RT-PCR: (A) SOD2 mRNA expression is higher in adults, & highest in the adult parenchyma. (B) No exposure effects on SOD2 mRNA were observed in neonates. (C) Adult SOD2 mRNA was decreased in PFP48. Data are presented as mean+SEM (n=5-7 rats/group, in each compartment), * significantly different compared to neonates in the same compartment, † significantly different compared to airways in the same age, ‡ significantly different compared to FA in the same compartment. Western blotting: (D) Scan of representative SOD2 & actin blots. (E) Neonatal whole lung SOD2 protein expression was unchanged with exposure, & (F) adult whole lung SOD2 protein trended upwards at PFP2, but was statistically insignificant. (G-J) Immunohistochemical localization of SOD2 in lung (n=6 rats/group). SOD2 protein was more abundant in adults compared to neonates, but no exposure specific differences were observed. Scale bar is 50 µm. Image collected & cropped by CiteAb from the following publication (https://particleandfibretoxicology.biomedcentral.com/articles/10.1186/1743-8977-10-34), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

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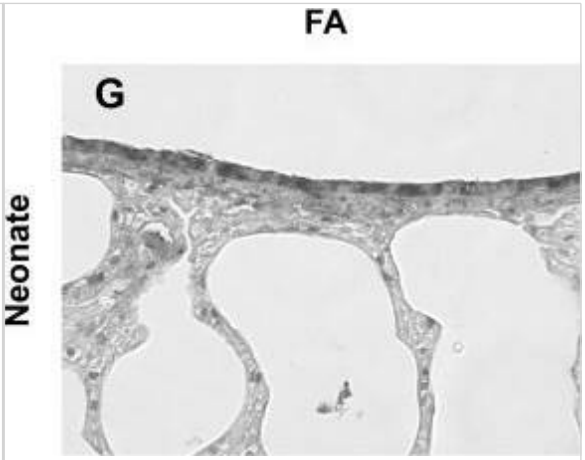
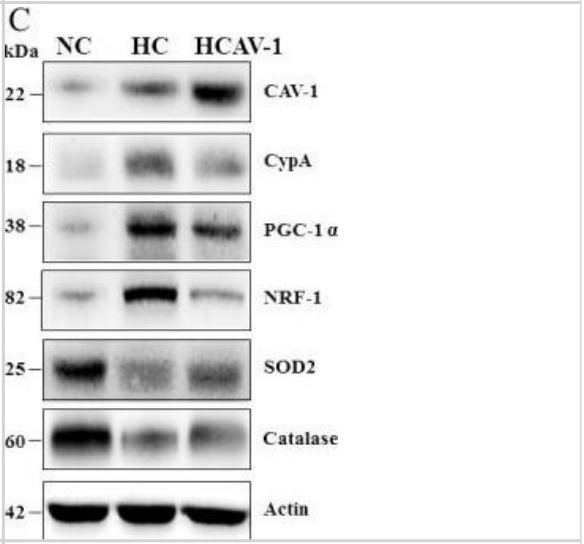


Western Blot: SOD2/Mn-SOD Antibody [NB100-1992] - CAV-1 preserves mitochondrial respiratory function through regulation of OXPHOS expression.(A) OXPHOS complex subunits were detected through western blotting with appropriate antibodies. CAV-1 treatment significantly restored hypercholesterolemia-associated increased ETC complex I–V proteins levels. (B) Percentage of the OXPHOS complex (I–V) band intensities is presented in the graph. (C) Representative immunoblot displaying levels of CAV-1, CyPA, mitochondrial biogenesis markers, & antioxidant enzymes in the NC, HC, & HCAV-1 groups. (D) Columns represent average values over three independent experiments. The density for the NC group was set at 1; * & † are significantly different for the NC & HC groups, respectively, at P < 0.05. β-actin was used as a loading control. Values are means ± SD. Image collected & cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0154210), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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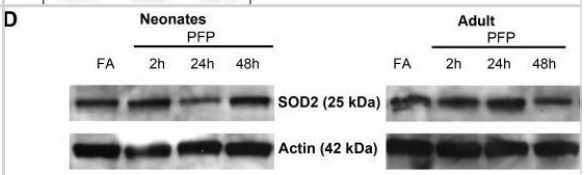

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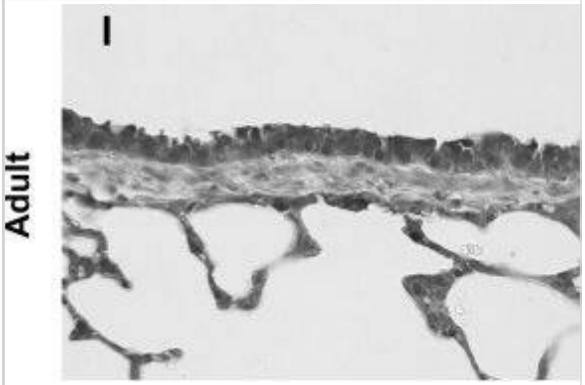

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Publications

Hesse R, Hurtado ML, Jackson RJ, Eaton SL et Al. Comparative profiling of the synaptic proteome from Alzheimer's disease patients with focus on the APOE genotype Acta Neuropathol Commun 2019-12-22 [PMID: 31862015]

Cai J, Chen Y, She Y et al. Aerobic exercise improves astrocyte mitochondrial quality and transfer to neurons in a mouse model of Alzheimer's disease. Brain pathology (Zurich, Switzerland) 2024-10-26 [PMID: 39462160]

Qi XY, Yuan JD, Liu ZY et al. Sirtuin 3-mediated deacetylation of superoxide dismutase 2 ameliorates sodium fluoride-induced mitochondrial dysfunction in porcine oocytes The Science of the total environment 2024-01-15 [PMID: 37944611]

Dai Z, Li D, Du X et al. Drosophila Caliban preserves intestinal homeostasis and lifespan through regulating mitochondrial dynamics and redox state in enterocytes PLOS Genetics 2020-10-15 [PMID: 33057338]

Braun JL, Messner HN, Cleverdon REG et al. Heterozygous SOD2 deletion selectively impairs SERCA function in the soleus of female mice Physiological Reports 2022-05-17 [PMID: 35581738] (Immunoprecipitation, Western Blot)

Gu X, Zhao L, Ye J et al. 1,25(OH)2D3 ameliorates doxorubicin?induced cardiomyopathy by inhibiting the NLRP3 inflammasome and oxidative stress Experimental and Therapeutic Medicine 2023-07-11 [PMID: 37559932] (WB, Mouse)

Details:
1:1000 dilution

Han B, Zhao H, Gong X et al. Upregulation of PGC-1 alpha Attenuates Oxygen-Glucose Deprivation-Induced Hippocampal Neuronal Injury Neural plasticity 2022-06-09 [PMID: 35719138] (ICC/IF, Mouse)

Chen H, Zhou J, Chen H et al. Bmi-1-RING1B prevents GATA4-dependent senescence-associated pathological cardiac hypertrophy by promoting autophagic degradation of GATA4 Clinical and translational medicine 2022-04-01 [PMID: 35390228] (WB, Mouse)

Peng L, Jiang J, Chen HN Et al. Redox-sensitive cyclophilin A elicits chemoresistance through realigning cellular oxidative status in colorectal cancer Cell reports 2021-11-30 [PMID: 34852234] (WB, Human)

Suresh V, Mohanty V, Avula K et al. Quantitative proteomics of hamster lung tissues infected with SARS-CoV-2 reveal host factors having implication in the disease pathogenesis and severity FASEB journal : official publication of the Federation of American Societies for Experimental Biology 2021-07-01 [PMID: 34105201] (IF/IHC, Hamster)

Chen L, Yang R et al. 1,25-Dihydroxyvitamin D exerts an antiaging role by activation of Nrf2-antioxidant signaling and inactivation of p16/p53-senescence signaling. Aging Cell 2019-01-06 [PMID: 30907059] (IF/IHC, Mouse)

Yu C, Chen S, Wang X et al. Exposure to maternal diabetes induces endothelial dysfunction and hypertension in adult male rat offspring Microvasc. Res. 2020-09-18 [PMID: 32956647] (WB, Rat)

More publications at http://www.novusbio.com/NB100-1992

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