Product Datasheet

SOD1/Cu-Zn SOD Antibody - BSA Free
NBP2-24915

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Reviews: 3 Publications: 21

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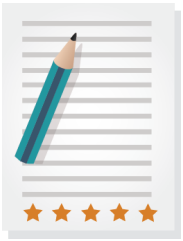
Updated 9/9/2025 v.20.1



NBP2-24915

SOD1/Cu-Zn SOD Antibody - BSA Free

Product Information

Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS

Product Description

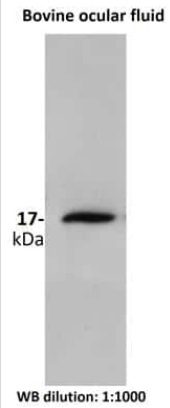
Description	Novus Biologicals Rabbit SOD1/Cu-Zn SOD Antibody - BSA Free (NBP2-24915) is a polyclonal antibody validated for use in IHC and WB. Anti-SOD1/Cu-Zn SOD Antibody: Cited in 20 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	6647
Gene Symbol	SOD1
Species	Human, Mouse, Rat, Bovine
Immunogen	The superoxide dismutase enzyme from bovine erythrocytes (CAS # 9054-89-1) was used as the immunogen.

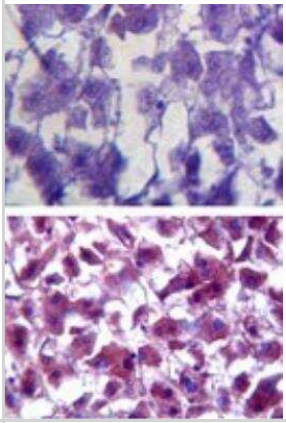
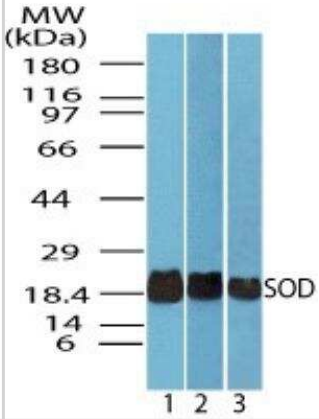
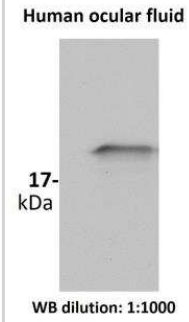
Product Application Details

Applications	Western Blot, Immunohistochemistry-Paraffin, Immunohistochemistry
Recommended Dilutions	Western Blot 1 - 2 ug/ml, Immunohistochemistry 1:200, Immunohistochemistry-Paraffin 1:200

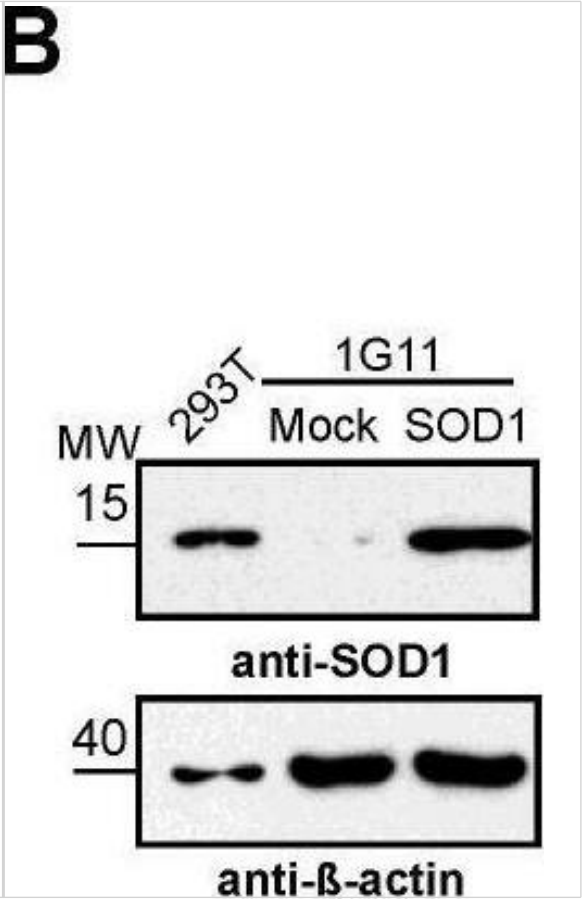
Images

Western Blot: SOD1/Cu-Zn SOD Antibody [NBP2-24915] - Bovine ocular fluid. Antibody at 1:1000. Western blot image submitted by a verified customer review.



Immunohistochemistry-Paraffin: SOD1/Cu-Zn SOD Antibody [NBP2-24915] - Analysis of Superoxide Dismutase 1 in FFPE human liver tissue using an isotype control (top) and NBP2-24915 (bottom) at 5 ug/ml.	
Western Blot: SOD1/Cu-Zn SOD Antibody [NBP2-24915] - Analysis of SOD in liver lysate of 1) human, 2) mouse, and 3) rat using this antibody. 025 ug/ml.	
Western Blot: SOD1/Cu-Zn SOD Antibody [NBP2-24915] - Human ocular fluid. Antibody at 1:1000. Western blot image submitted by a verified customer review.	
Production of superoxide radicals (O2–) and expression of antioxidant enzymes during MSC expansion, with or without methylene blue (MB) addition. a Quantification of superoxide radicals was carried out by MitoSOX staining (n = 3; values represent the mean +/- SEM). *p < 0.05. b Mitochondrial (MnSOD) and cytosolic superoxide dismutase (Cu/ZnSOD) Western blots were performed on proteins isolated from the same samples, and c results were normalized to actin Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/28061861), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

SOD1 does not affect laminin α5 expression in endothelial cells. (A) mRNA levels of human SOD1 in 1G11-mock and 1G11-SOD1 cells, as determined by RT-qPCR. Each dot represents the mean of a triplicate from an independent experiment *** $p < 0.001$; two-tailed t-test. (B) Human SOD1 protein levels in 1G11-mock and 1G11-SOD1 cells as determined by immunoblotting; HEK-293T cells were used as a human SOD1 reference. Immunoblots were rehybridized with an anti-β-actin antibody as a loading control. A representative experiment is shown. (C) 1G11-mock and 1G11-SOD1 cells were incubated (14 h) with the conditioned medium from N202.1A tumor cell line cultures (MCT) and then stained with DHE (red); nuclei were DAPI-counterstained (blue). Treatment with the SOD mimetic MnTBAP was used as control (right panels). Scale bars 25 um. (D) SOD activity in 1G11-mock and 1G11-SOD1 cell extracts. (E) Relative LAMA5 mRNA levels in 1G11-mock and 1G11-SOD1 cells. Each dot represents the mean of a triplicate from an independent experiment (n = 5). $p = 0.32$, two-tailed t-test. (F) Representative images of laminin α5 (green; PAC078MV01) staining in 1G11-mock and 1G11-SOD1 cells; nuclei were DAPI counterstained (blue). Scale bars 50 um. (G) Quantification of laminin α5 mean fluorescence intensity from the images as in (F) (n = 5 fields/condition). $p = 0.58$; two-tailed t-test. (H) Relative LAMA4 mRNA levels in 1G11-mock, 1G11-SOD3 and 1G11-SOD1 cells. Each dot represents the mean of a triplicate from an independent experiment (n = 6). ** $p < 0.01$, *** $p < 0.001$, two-tailed t-test. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/35267534), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Bertolo A, Capossela S, Frankl G et al. Oxidative status predicts quality in human mesenchymal stem cells Stem Cell Res Ther Jan 6 2017 12:00AM [PMID: 28061861] (FLOW, Human). Stem Cell Res Ther. 2017-01-06 [PMID: 28061861] (Western Blot, Rat)

Details:
This citation used the FITC version of this antibody.

F Wei, CJ Neal, TS Sakthivel, Y Fu, M Omer, A Adhikary, S Ward, KM Ta, S Moxon, M Molinari, J Asiatico, M Kinzel, SN Yarmolenko, V San Cheong, N Orlovskaya, R Ghosh, S Seal, M Coathup A novel approach for the prevention of ionizing radiation-induced bone loss using a designer multifunctional cerium oxide nanozyme Bioactive materials, 2022-09-21;21(0):547-565. 2022-09-21 [PMID: 36185749] (Western Blot, Rat)

Mueller, J;van Muilekom, DR;Ehlers, J;Suhr, M;Hornburg, SC;Bang, C;Wilkes, M;Schultheiß, T;Maser, E;Rebl, A;Goldammer, T;Seibel, H;Schulz, C; Dietary Chlorella vulgaris supplementation modulates health, microbiota and the response to oxidative stress of Atlantic salmon Scientific reports 2024-10-10 [PMID: 39389986]

Kwon I, Song W, Jang Y et al. Elevation of hepatic autophagy and antioxidative capacity by endurance exercise is associated with suppression of apoptosis in mice Annals of Hepatology [PMID: 31611063]

Chang YJ, Jenny LA, Li YS et al. CRISPR editing demonstrates rs10490924 raised oxidative stress in iPSC-derived retinal cells from patients with ARMS2/HTRA1-related AMD Proceedings of the National Academy of Sciences of the United States of America 2023-05-09 [PMID: 37126685]

Noor MI, Rahman MS Roundup® disrupts tissue architecture, attenuates Na+/K+-ATPase expression, and induces protein oxidation/nitration, cellular apoptosis, and antioxidant enzyme expressions in the gills of goldfish, Carassius auratus Comparative biochemistry and physiology. Toxicology & pharmacology : CBP 2023-07-31 [PMID: 37532112]

Najjar R Raspberry Polyphenols Target Molecular Pathways of Heart Failure Thesis 2023-01-01

Martinez-Martel I, Bai X, Batalle G, Pol O New Treatment for the Cognitive and Emotional Deficits Linked with Paclitaxel-Induced Peripheral Neuropathy in Mice Antioxidants (Basel, Switzerland) 2022-12-01 [PMID: 36552595] (WB, Mouse)

Lacy B, Rahman MS Interactive effects of high temperature and pesticide exposure on oxidative status, apoptosis, and renin expression in kidney of goldfish: Molecular and cellular mechanisms of widespread kidney damage and renin attenuation Journal of applied toxicology : JAT 2022-06-13 [PMID: 35698815]

Lacy B, Rahman MS, Rahman MS Potential mechanisms of Na+/K+-ATPase attenuation by heat and pesticides co-exposure in goldfish: role of cellular apoptosis, oxidative/nitrative stress, and antioxidants in gills Environmental science and pollution research international [PMID: 35352221]

Carmona-Rodriguez L, Martinez-Rey D, Martin-Gonzalez P et al. Superoxide Dismutase-3 Downregulates Laminin alpha5 Expression in Tumor Endothelial Cells via the Inhibition of Nuclear Factor Kappa B Signaling Cancers 2022-02-26 [PMID: 35267534] (WB, Human)

Pouso-Vazquez E, Bai X, Batalle G et al. Effects of heme oxygenase 1 in the molecular changes and neuropathy associated with type 2 diabetes in mice Biochemical pharmacology 2022-03-08 [PMID: 35276215] (WB, Mouse)

More publications at http://www.novusbio.com/NBP2-24915

Procedures

Western Blot Protocol for SOD1/Cu-Zn SOD Antibody (NBP2-24915)
Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 10-25 ug of total protein per lane.
2. Transfer proteins to PVDF membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain the membrane with Ponceau S (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot TBS -0.05% Tween 20 (TBST).
5. Block the membrane in 5% Non-fat milk in TBST (blocking buffer) for at least 1 hour.
6. Wash the membrane in TBST three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate overnight at 4C with gentle rocking.
8. Wash the membrane in TBST three times for 10 minutes each.
9. Incubate the membrane in diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) for 1 hour at room temperature.
10. Wash the blot in TBST three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturer's instructions.

Immunohistochemistry-Paraffin Protocol for SOD1/Cu-Zn SOD Antibody (NBP2-24915)
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes (keep slides in the sodium citrate buffer at all times).

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in PBS for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1% BSA in PBS) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4 C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul HRP polymer conjugated secondary antibody. Incubate 30 minutes at room temperature.
7. Wash sections three times in wash buffer for 5 minutes each.
8. Add 100-400 ul DAB substrate to each section and monitor staining closely.
9. As soon as the sections develop, immerse slides in deionized water.
10. Counterstain sections in hematoxylin.
11. Wash sections in deionized water two times for 5 minutes each.
12. Dehydrate sections.
13. Mount coverslips.

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Products Related to NBP2-24915

NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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