

Product Datasheet

TNF-alpha Antibody - BSA Free NBP1-19532

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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NBP1-19532

TNF-alpha 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

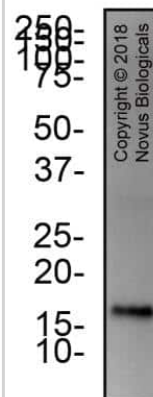
Product Description	
Description	Novus Biologicals Rabbit TNF-alpha Antibody - BSA Free (NBP1-19532) is a polyclonal antibody validated for use in IHC, WB, Flow and ICC/IF. Anti-TNF-alpha Antibody: Cited in 82 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	7124
Gene Symbol	TNF
Species	Human, Mouse, Rat, Canine, Fish
Reactivity Notes	Fish reactivity reported in scientific literature (PMID: 29321977). Immunogen displays the following percentage of sequence identity for non-tested species: porcine (89%), equine (87%), and guinea pig (84%). Use in Canine reported in scientific literature (PMID:32656339).
Immunogen	A synthetic peptide made to an internal portion of the human TNF alpha protein (between residues 100-200) [Uniprot: P01375]

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry Free-Floating
Recommended Dilutions	Western Blot 1:250 - 1:500, Flow Cytometry, Immunohistochemistry 1:200, Immunocytochemistry/ Immunofluorescence 1:200 - 1:300, Immunohistochemistry-Paraffin 1:200, Immunohistochemistry-Frozen, Immunohistochemistry Free-Floating
Application Notes	Western Blot data from customer review and citation (PMID: 24223475). Use in Immunohistochemistry-free floating reported in scientific literature (PMID: 26219646). Use in Immunohistochemistry-Frozen reported in scientific literature (PMID: 26725948). Use in FLOW reported in scientific literature (PMID: 26889045).

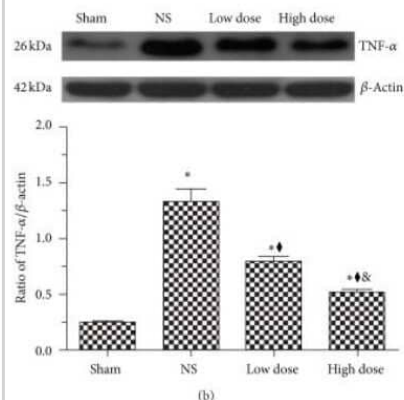


Images

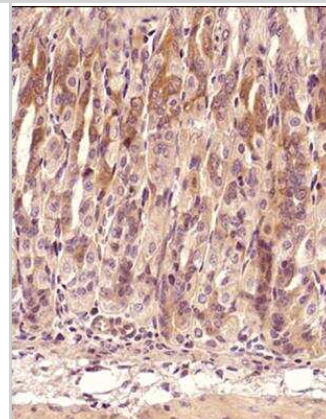
Western Blot: TNF-alpha Antibody [NBP1-19532] - Recombinant human TNF alpha (10 ng) was separated on a 12% gel by SDS-PAGE, transferred to 0.2 um PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/ml anti-TNF alpha in 5% block buffer and detected with an anti-rabbit HRP secondary antibody using chemiluminescence.



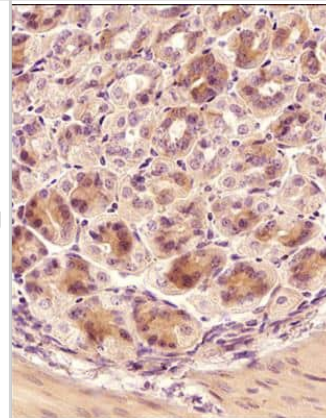
Western Blot: TNF-alpha Antibody [NBP1-19532] - Scutellarin attenuates hypertension-induced brain expression of NF-kappaB, TNF-alpha, IL-1beta, and IL-18. Western immunoblot analysis for TNF-alpha in the rat cortex and striatum. Treatment with scutellarin significantly reduced the expression of these inflammatory markers in a dose-dependent manner. *P < 0.001 versus sham group; #P < 0.05, P < 0.001 versus NS group; &P < 0.001 versus low-dose group. Image collected and cropped by CiteAb from the following publication (<https://www.hindawi.com/journals/mi/2013/432623/>), licensed under a CC-BY license.



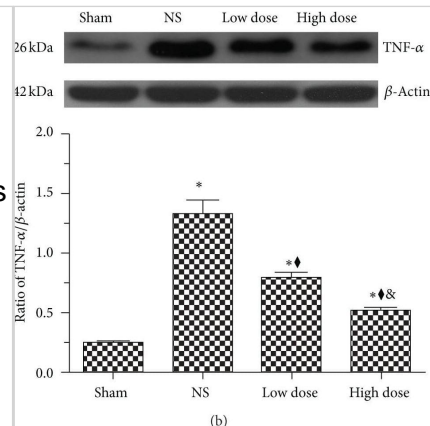
Immunohistochemistry-Paraffin: TNF-alpha Antibody [NBP1-19532] - Analysis of a FFPE tissue section of mouse intestine using TNF-alpha antibody (NBP1-19532) at 1:300 dilution. The binding of this primary antibody to TNF-alpha protein in the section was detected using HRP-labeled secondary antibody and DAB reagent, and nuclei of cells were counterstained using hematoxylin. This TNF-alpha antibody generated an expected diffused immunostaining of this protein in the tested tissue. Staining was primarily observed in the epithelial cells and some cells showed membrane positivity also.



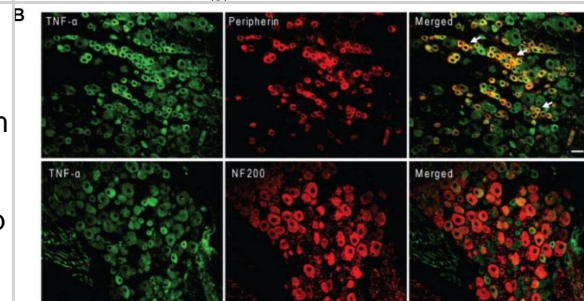
Immunohistochemistry-Paraffin: TNF-alpha Antibody [NBP1-19532] - Analysis of a FFPE tissue section of mouse intestine using TNF-alpha antibody (NBP1-19532) at 1:300 dilution. The binding of this primary antibody to TNF-alpha protein in the section was detected using HRP-labeled secondary antibody and DAB reagent, and nuclei of cells were counterstained using hematoxylin. This TNF-alpha antibody generated an expected immunopositivity of this protein in the tested tissue. Staining was primarily observed in the epithelial cells while some staining was present in mucosa muscularis also.



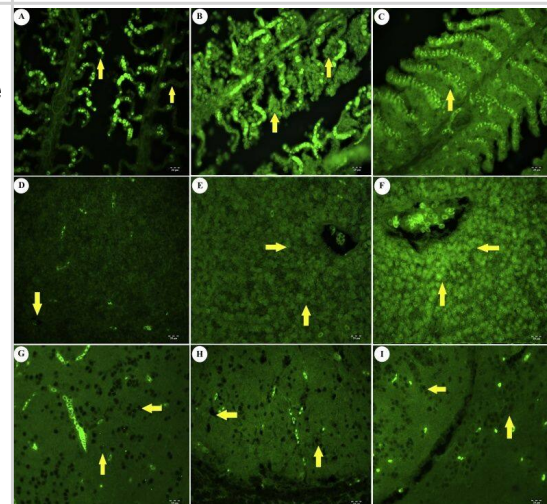
Scutellarin attenuates hypertension-induced brain expression of NF- κ B, TNF- α , IL-1 β , and IL-18. Western immunoblot analysis for (a) NF- κ B p65, (b) TNF- α , (c) IL-1 β , and (d) IL-18 in the rat cortex and striatum. Treatment with scutellarin significantly reduced the expression of these inflammatory markers in a dose-dependent manner. * $P < 0.001$ versus sham group; # $P < 0.05$, $\square P < 0.001$ versus NS group; & $P < 0.001$ versus low-dose group.



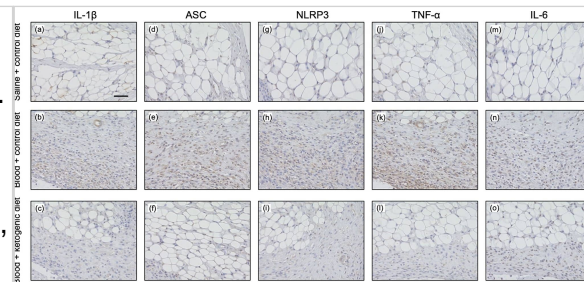
Immunocytochemistry/ Immunofluorescence: TNF-alpha Antibody - BSA Free [NBP1-19532] - Effects of femoral artery occlusion on TNF- α signal in sensory nerves. (A) Seventy-two hours of femoral artery occlusion increased the levels of TNF- α in the DRG tissues as compared with them in DRG of control limbs ($n = 6$ in each group); & PTX given into the hindlimb muscles attenuated amplification of TNF- α in the DRG tissues of limbs with femoral artery occlusion ($n = 8$). $\square P < 0.05$, occlusion group vs. control & occlusion with prior PTX. (B) Immunofluorescence was used to examine double-labeling for TNF- α & peripherin/NF-200 ($n = 3$). Peripherin was used to label DRG neurons that project thin C-fibers. NF200 was used to identify A-fibers of DRG neurons. Representative photomicrographs show co-existence of TNF- α & peripherin staining in DRG neurons (top panel), whereas few TNF- α & NF-200 staining were observed in DRG neurons (bottom panel). Arrows indicate representative positive cells for both TNF- α & peripherin after they were merged. Scale bar = 50 μ m. (C) Representative bands (left panel) & averaged data (right panel), demonstrating that femoral artery occlusion upregulated protein expression TNF- α receptor subtype TNFR1, but not TNFR2. A significant difference in TNFR1 was seen between control & occluded groups. $\square P < 0.05$ vs. control. $n = 6$ in each group. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30374312>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



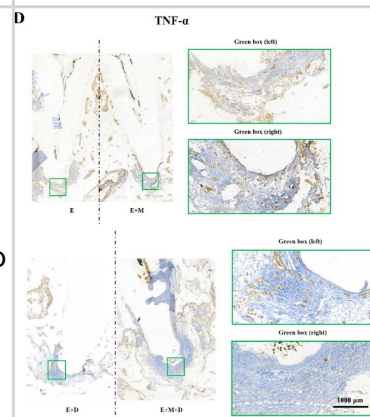
Immunocytochemistry/ Immunofluorescence: TNF-alpha Antibody - BSA Free [NBP1-19532] - Immunofluorescence staining results of TNF- α (96 h). A) Lamella of gill tissue (arrow). Control group. IF. 20 μ m. B) Positive reaction in lamellar cells of gill tissue (arrows). Low dose toxic group. IF. 20 μ m. C) Positivity in lamellar cells of gill tissue (arrow). High dose toxic group. IF. 20 μ m. D) Liver tissue, vena centralis (arrow). Control group. IF. 20 μ m. E) Positive reactions in hepatocytes (arrows). Low dose toxic group. IF. 20 μ m. F) Positive reactions in hepatocytes (arrows). High dose toxic group. IF. 20 μ m. G) Weak positive reactions in neurons (arrows). Control group. IF. 20 μ m. H) Weak positivity in neurons (arrows). Low dose toxic group. IF. 20 μ m. I) Positivity in neurons (arrows). High dose toxic group. IF. 20 μ m. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29321977>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Suppressive effects of ketogenic diet on the number of inflammatory cytokine-positive cells and inflammasome component protein-positive cells surrounding knee joint after repeated intra-articular blood injections. The immunohistochemical staining of knee joints on post intra-articular injection day 26 was compared, in the intra-articular saline injection + control diet (Saline + control diet) group (a, d, g, j, and m), the intra-articular blood injection + control diet (Blood + control diet) group (b, e, h, k, and n), and the intra-articular blood injection + ketogenic diet (Blood + ketogenic diet) group (c, f, i, l, and o) using anti-IL-1 β antibody (a – c), anti-ASC antibody (d – f), anti-NLRP3 antibody (g – i), anti-TNF- α antibody (j – l), and anti-IL-6 antibody (m – o). The scale bar in (a) indicates 50 μ m. The number of inflammatory cytokine-positive cells (IL-1 β , TNF- α , and IL-6) and inflammasome component protein-positive cells (ASC and NLRP3) per 1 mm² in the periarticular tissues was counted (p – t). White: Saline + control diet group, black: Blood + control diet group, and gray: Blood + ketogenic diet group (p – t). Data are shown as mean and SD. Intergroup comparisons were assessed by one-way ANOVA. Bonferroni multiple comparison test was used for comparisons among each group (*p < 0.05, **p < 0.01). Image collected and cropped by CiteAb from the following open publication (<https://www.nature.com/articles/s41598-024-77074-6>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Histological and immunohistochemistry results of periapical lesions in each group. (A) Representative histopathological images in periapical areas after root canal filling; (B) The inflammation grade evaluation of periapical lesions (n = 10); (C) Representative immunohistochemistry (IHC) staining of MMP-9 in periapical areas after root canal filling. Green boxes indicate peripheral periodontal tissue; (D) Representative immunohistochemistry (IHC) staining of TNF- α in periapical areas after root canal filling. Green boxes indicate peripheral periodontal tissue. ns p > 0.05, not significant, * p < 0.05, ** p < 0.01. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/36361925>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Lee S, Bae E, Park S et al. Microglia-driven inflammation induces progressive tauopathies and synucleinopathies. *Experimental & Molecular Medicine* 2025-05-01 [PMID: 40307569]

Khedre E, Hegab A, El-Mahis A et al. Ziziphus spina-christi alleviates paracetamol-induced hepatorenal toxicity in rats through in vivo and computational approaches. *Scientific reports* 2025-08-18 [PMID: 40825988]

Sugimoto K, Yang C, Ono M et al. Neutrophils induce astrocytic AQP4 expression via IL-1 α and TNF, contributing to cerebral oedema in ischaemic stroke rats. *Scientific Reports* 2025-04-23 [PMID: 40263535]

Gousias F, Stylianaki I, Giannenas I et al. Effects of Milk Thistle Extract Supplementation on Performance, Egg Quality, and Liver Pathology of Laying Hens' Fed Diets Lacking Supplemental Choline Chloride. *Veterinary Sciences* 2025-01-21 [PMID: 40005837]

Esawie M, Matboli M, Bushra M et al. ZBiotics ameliorates T2DM-induced histopathological damage in liver, kidney and adipose tissues by modulating the NOD-like receptor signaling in Wistar rats. *Diabetology & Metabolic Syndrome* 2025-02-04 [PMID: 39905472]

Boss MK, Ke Y, Bian L Et al. Therapeutic intervention using a Smad7-based Tat protein to treat radiation- induced oral mucositis *International journal of radiation oncology, biology, physics* 2021-10-02 [PMID: 34610386]

El Ayadi A, Wang CZ, Zhang M et al. Metal chelation reduces skin epithelial inflammation and rescues epithelial cells from toxicity due to thermal injury in a rat model *Burns Trauma* 2020-10-02 [PMID: 33033727]

Oh JY, Hwang TY, Jang JH et al. Muscovite nanoparticles mitigate neuropathic pain by modulating the inflammatory response and neuroglial activation in the spinal cord *Neural Regeneration Research* 2020-05-13 [PMID: 32394976]

Garcia-Hernandez ML, Rangel-Moreno J, Garcia-Castaneda M et al. Dendritic cell-specific transmembrane protein is required for synovitis and bone resorption in inflammatory arthritis *Frontiers in Immunology* 2022-11-07 [PMID: 36420272]

Krupp KT, Yaeger JDW, Ledesma LJ et Al. Single administration of a psychedelic [(R)-DOI] influences coping strategies to an escapable social stress *Neuropharmacology* 2024-04-16 [PMID: 38636726]

Chen XC, Huang LF, Tang JX et Al. Asiatic acid alleviates cisplatin-induced renal fibrosis in tumor-bearing mice by improving the TFEB-mediated autophagy-lysosome pathway *Biomed Pharmacother* 2023-08-17 [PMID: 37413899]

Zhang W, Zhou Q., et Al. Fructus Arctii Mitigates Depressive Disorder via the Let-7e-Modulated Toll-Like Receptor (TLR) Signaling Pathway *Brain Behav* 2024-11-13 [PMID: 39538967]

More publications at <http://www.novusbio.com/NBP1-19532>



Procedures

Immunohistochemistry Protocol specific for TNF alpha antibody (NBP1-19532)

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.

Staining:

1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution 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 biotinylated diluted secondary antibody. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.

Immunocytochemistry/ Immunofluorescence Protocol for TNF-alpha Antibody (NBP1-19532)

Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.



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Products Related to NBP1-19532

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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