Product Datasheet

TNF-alpha Antibody - BSA Free
NBP1-19532

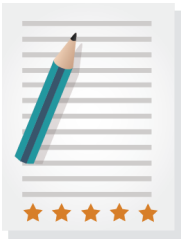
Unit Size: 0.1 mg

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

Reviews: 3 Publications: 83

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NBP1-19532

Updated 10/23/2024 v.20.1



NBP1-19532

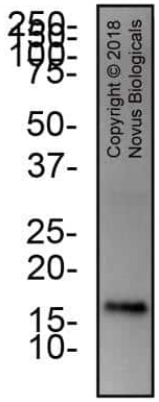
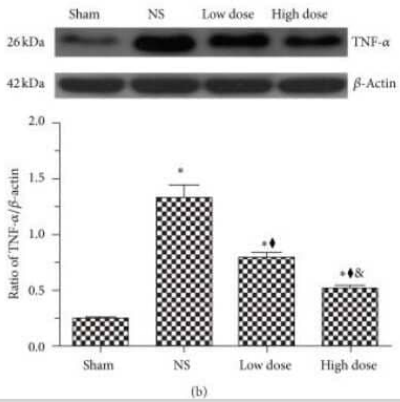
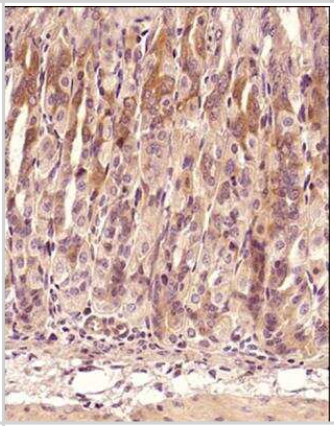
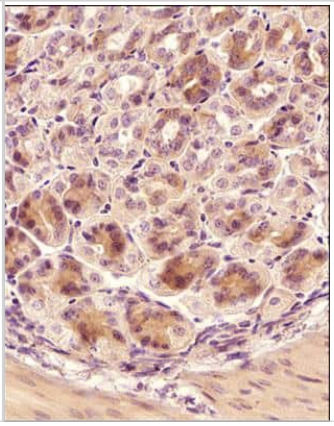
TNF-alpha Antibody - BSA Free

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

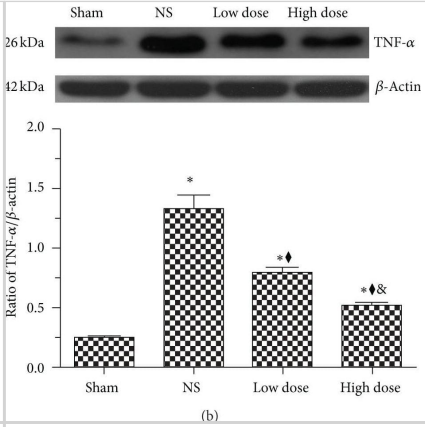
Product Description	
Host	Rabbit
Gene ID	7124
Gene Symbol	TNF
Species	Human, Mouse, Rat, Canine, Fish
Reactivity Notes	Fish reactivity reported in scientific literature (PMID: 29321977). Immunogen displays the following percentage of sequence identity for non-tested species: porcine (89%), equine (87%), 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, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, 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).

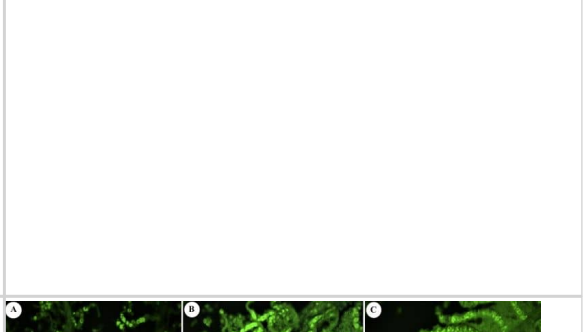
Images

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.	

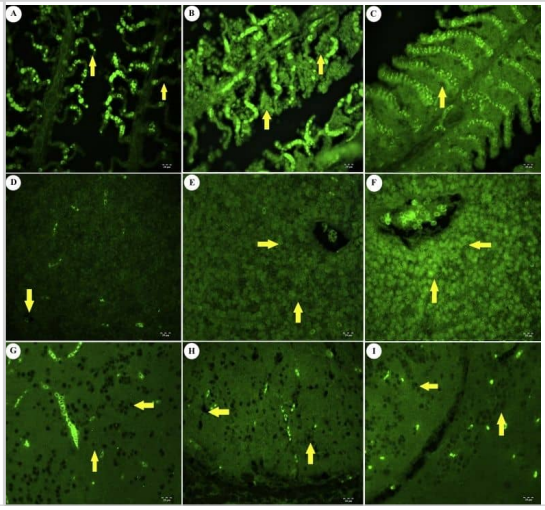
Scutellarin attenuates hypertension-induced brain expression of NF-κB, TNF-α, IL-1β, and IL-18. Western immunoblot analysis for (a) NF-κB p65, (b) TNF-α, (c) IL-1β, and (d) IL-18 in the rat cortex and striatum. Treatment with scutellarin significantly reduced the expression of these inflammatory markers in a dose-dependent manner. *P < 0.001 versus sham group; #P < 0.05, □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). □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 μm. (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. □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] - Immunoflorescence staining results of TNF-α (96 h). A). Lamella of gill tissue (arrow). Control group. IF. 20 μm. B) Positive reaction in lamellar cells of gill tissue (arrows). Low dose toxic group. IF. 20 μm. C) Positivity in lamellar cells of gill tissue (arrow). High dose toxic group. IF. 20 μm. D) Liver tissue, vena centralis (arrow). Control group. IF. 20 μm. E) Positive reactions in hepatocytes (arrows). Low dose toxic group. IF. 20 μm. F) Positive reactions in hepatocytes (arrows). High dose toxic group. IF. 20 μm. G) Weak positive reactions in neurons (arrows). Control group. IF. 20 μm. H) Weak positivity in neurons (arrows). Low dose toxic group. IF. 20 μm. I) Positivity in neurons (arrows). High dose toxic group. IF. 20 μm. 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.



Publications

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]

AK Rohlfing, K Kolb, M Sigle, M Ziegler, A Bild, P Münzer, J Sudmann, V Dicenta, T Harm, MC Manke, S Geue, M Kremser, M Chatterjee, C Liang, H von Eysmon, T Dandekar, D Heinzmann, M Günter, S von Ungern, M Büttcher, T Castor, S Mencl, F Langhauser, K Sies, D Ashour, MC Beker, M Lämmerhofe, SE Autenrieth, TE Schäffer, S Laufer, P Szklanna, P Maguire, M Heikenwald, KAL Müller, DM Hermann, E Kilic, R Stumm, G Ramos, C Kleinschni, O Borst, HF Langer, D Rath, M Gawaz ACKR3 regulates platelet activation and ischemia-reperfusion tissue injury Nature Communications, 2022-04-05;13(1):1823. 2022-04-05 [PMID: 35383158]

Antonella Riva, Eray Sahin, Greta Volpedo, Andrea Petretto, Chiara Lavarello, Rossella Di Sapia, Davide Barbarossa, Nasibeh Riahi Zaniani, Ilaria Craparotta, Maria Chiara Barbera, Uğur Sezerman, Annamaria Vezzani, Pasquale Striano, Teresa Ravizza Identification of an epilepsy-linked gut microbiota signature in a pediatric rat model of acquired epilepsy. Neurobiology of disease 2024-04-10 [PMID: 38485093]

Tiankui Ma, Xin Li, Yonghong Zhu, Shufan Yu, Tianyan Liu, Xiaodan Zhang, Dong Chen, Shuyan Du, Tong Chen, Shuo Chen, Yanyan Xu, Qiuling Fan Excessive Activation of Notch Signaling in Macrophages Promote Kidney Inflammation, Fibrosis, and Necroptosis Frontiers in Immunology 2022-02-25 [PMID: 35280997]

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] (Immunohistochemistry, Immunocytochemistry/ Immunofluorescence)

Salman S, Guermonprez C, Peno-Mazzarino L et al. Photobiomodulation Controls Keratinocytes Inflammatory Response through Nrf2 and Reduces Langerhans Cells Activation Antioxidants (Basel, Switzerland) 2023-03-21 [PMID: 36979014] (IHC-P, Human)

Ghebryal LN, Noshy MM, El-Ghor AA, Eissa SM Comparative analysis of Acomys cahirinus and Mus musculus responses to genotoxicity, oxidative stress, and inflammation Scientific reports 2023-03-09 [PMID: 36894692] (Immunohistochemistry, Mouse)

Yeh JL, Kuo CH, Shih PW et al. Xanthine derivative KMUP-1 ameliorates retinopathy Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie 2023-07-03 [PMID: 37406513] (WB, Rhesus Macaque)

Ohkawa Y, Kanto N, Nakano M et al. Involvement of langerin in the protective function of a keratan sulfate-based disaccharide in an emphysema mouse model The Journal of biological chemistry 2023-07-14 [PMID: 37454739] (IHC-P, Mouse)

Azzam S, Abdel khalek M, Abdel Rahman A et al. Revealing how phenytoin triggers liver damage and the potential protective effects of Balanites Aegyptiaca fruit extracts: Exploring Nrf2/MAPK/ Beclin-1 signaling pathways Biomedicine & Pharmacotherapy 2023-09-01 [PMID: 37541174] (IHC-P, Rat)

Details:
Dilution: 1:100

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 1:25,0000 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

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP1-19532AF488	TNF-alpha Antibody [Alexa Fluor® 488]

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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