

# Product Datasheet

## NLRP3/NALP3 Antibody - BSA Free NBP1-77080

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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**NBP1-77080**

NLRP3/NALP3 Antibody - BSA Free

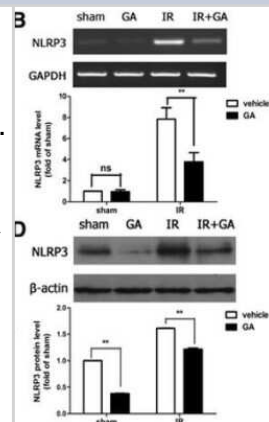
Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	110 kDa

Product Description	
Description	Novus Biologicals Rabbit NLRP3/NALP3 Antibody - BSA Free (NBP1-77080) is a polyclonal antibody validated for use in IHC, WB, ELISA, ICC/IF and IP. Anti-NLRP3/NALP3 Antibody: Cited in 35 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	114548
Gene Symbol	NLRP3
Species	Human, Mouse, E. coli
Reactivity Notes	E. coli reactivity reported in scientific literature (PMID: 31551961).
Immunogen	NLRP3/NALP3 Antibody was raised against a 16 amino acid synthetic peptide from near the amino terminus of human NALP3. The immunogen is located within amino acids 120 - 170 of NALP3.

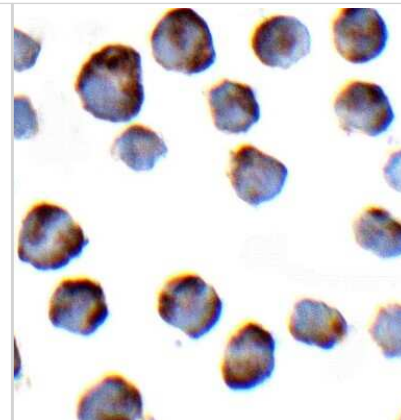
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, ELISA, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunoprecipitation, SDS-Page
Recommended Dilutions	Western Blot 1 - 2 $\mu$ g/mL, ELISA 1:100 - 1:2000, Immunohistochemistry 1:200, Immunocytochemistry/ Immunofluorescence 20 $\mu$ g/mL, Immunoprecipitation reported in scientific literature (PMID 31551961), Immunohistochemistry-Paraffin 1:200, SDS-Page reported in scientific literature (PMID 31551961)

**Images**

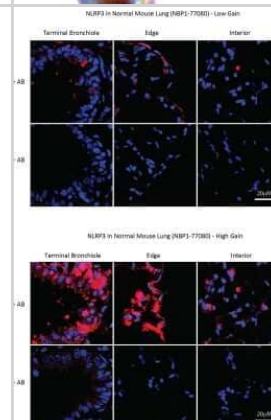
Western Blot: NLRP3/NALP3 Antibody - BSA Free [NBP1-77080] - HMGB1 promoted the activation of canonical NLRP3 inflammasome in retinal IR injury. The intravitreal injection of HMGB1 inhibitor, GA, significantly suppressed mRNA (B) and protein (D) production of NLRP3. Data are shown as mean  $\pm$  SD. \*\*P < 0.01 vs sham group. Image collected and cropped by CiteAb from the following publication (<https://www.jneuroinflammation.com/content/12/1/137>) licensed under a CC-BY license.



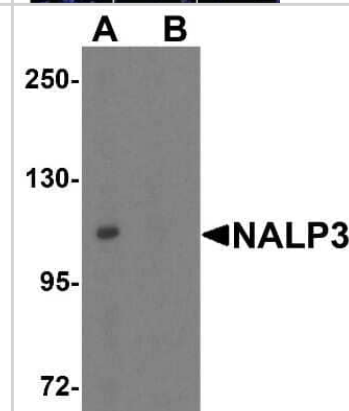
Immunocytochemistry/Immunofluorescence: NLRP3/NALP3 Antibody - BSA Free [NBP1-77080] - Staining of NALP3 in K562 cells with NALP3 antibody at 2 ug/mL.



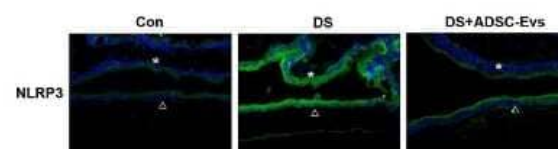
Immunohistochemistry-Paraffin: NLRP3/NALP3 Antibody - BSA Free [NBP1-77080] - Analysis of NALP3 in mouse lung tissue using anti-NALP3 antibody. Image from verified customer review.



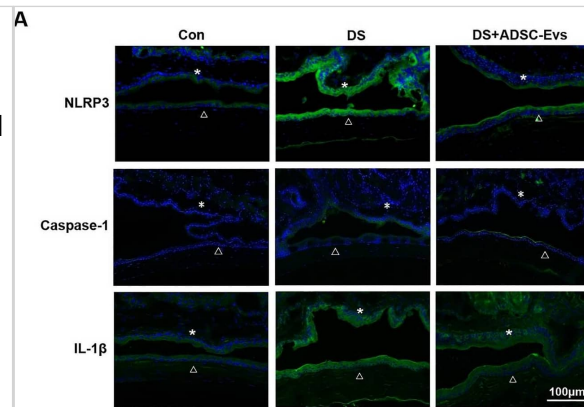
Western Blot: NLRP3/NALP3 Antibody - BSA Free [NBP1-77080] - Analysis of NALP3 in K562 cell lysate with NALP3 antibody at 1 ug/mL (A) in the absence and (B) in the presence of blocking peptide.



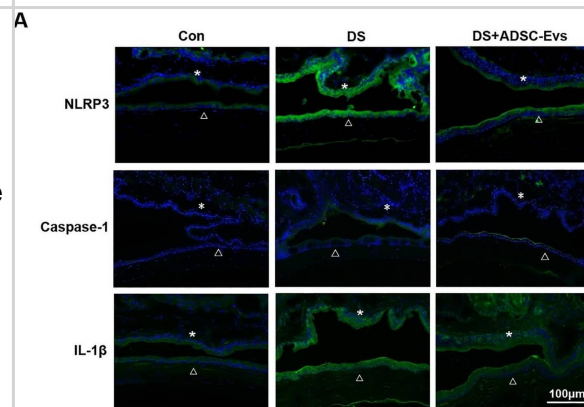
Immunocytochemistry/Immunofluorescence: NLRP3/NALP3 Antibody - BSA Free [NBP1-77080] - hADSC-Evs suppressed NLRP3 inflammasome activation in ocular surface of experimental mice under desiccating stress. Representative image of immunofluorescent staining of NLRP3 related genes in corneal and conjunctival epithelia of desiccating mice or treated with hADSC-EVs (\*conjunctiva; open triangle cornea). Image collected and cropped by CiteAb from the following publication ([//pubmed.ncbi.nlm.nih.gov/32884023/](https://pubmed.ncbi.nlm.nih.gov/32884023/)) licensed under a CC-BY license.



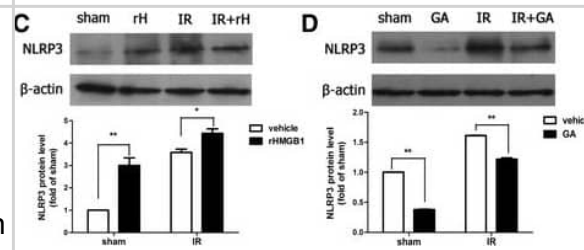
hADSC-Evs suppressed NLRP3 inflammasome activation in ocular surface of experimental mice under desiccating stress. (A) Representative image of immunofluorescent staining of NLRP3 related genes in corneal and conjunctival epithelia of desiccating mice or treated with hADSC-EVs (\*conjunctiva; open triangle cornea). (B,C) qRT-PCR showed the mRNA levels of NLRP3 related genes in conjunctiva and cornea (four corneas/conjunctivas were mixed as a sample). Data was shown as mean  $\pm$  SEM. \* $p < 0.05$ .



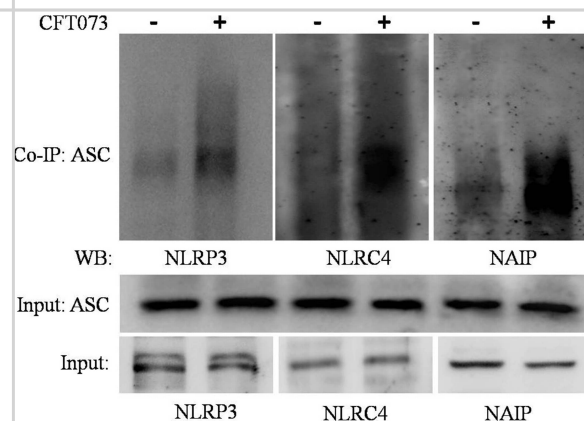
Immunocytochemistry/ Immunofluorescence: NLRP3/NALP3 Antibody - BSA Free [NBP1-77080] - hADSC-Evs suppressed NLRP3 inflammasome activation in ocular surface of experimental mice under desiccating stress. (A) Representative image of immunofluorescent staining of NLRP3 related genes in corneal & conjunctival epithelia of desiccating mice or treated with hADSC-EVs (\*conjunctiva; open triangle cornea). (B,C) qRT-PCR showed the mRNA levels of NLRP3 related genes in conjunctiva & cornea (four corneas/conjunctivas were mixed as a sample). Data was shown as mean  $\pm$  SEM. \* $p < 0.05$ . Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/32884023>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



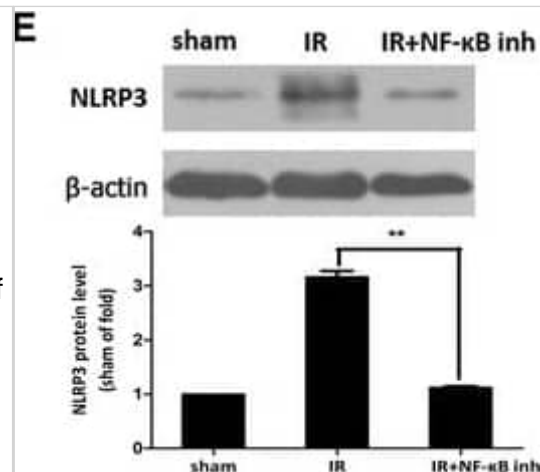
Western Blot: NLRP3/NALP3 Antibody - BSA Free [NBP1-77080] - HMGB1 promoted the activation of canonical NLRP3 inflammasome in retinal IR injury. The intravitreal injection of exogenous rHMGB1 significantly promoted the mRNA & protein production of NLRP3 (a, c) & ASC (e, g) & activation of caspase-1 (i). Thus, the intravitreal injection of HMGB1 inhibitor, GA, significantly suppressed the production of NLRP3 (b, d) & ASC (f, h) & activation of caspase-1 (j). Data are shown as mean  $\pm$  SD. \* $P < 0.05$ , \*\* $P < 0.01$  vs sham group Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/26224068>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: NLRP3/NALP3 Antibody - BSA Free [NBP1-77080] - Co-immunoprecipitation assay: Figure showing interaction of NLRP3, NLRC4 & NAIP with ASC during CFT073 infection in THP-1m. Cytoplasmic extracts of THP-1m infected with or without CFT073, 6 h post stimulation were subjected to IP & WB by various antibodies (ASC, NLRP3, NLRC4, & NAIP) as described in material & methods. Cytoplasmic extract used as input was subjected to check NLRP3, ASC, NLRC4 & NAIP expression as shown in figure. ASC antibody was used to co-immunoprecipitate the complex from cytoplasmic extracts & then immunoblotted to detect NLRP3, NLRC4 & NAIP. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31551961>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: NLRP3/NALP3 Antibody - BSA Free [NBP1-77080] - HMGB1 regulated the activation of NLRP3, rather than the activation of caspase-8, via NF- $\kappa$ B pathway. a, b NF- $\kappa$ B was activated in ischemic retina at the early stage after reperfusion. c, d Intraocular injection rHMGB1 or GA could promote or suppress the production of phosphor-NF- $\kappa$ B p65. e, f Intravitreal injection of NF- $\kappa$ B p65 inhibitor, JSH-23, significantly reduced the activation of NLRP3 & decreased the processing of IL-1 $\beta$ , g rather than caspase-8. However, intravitreal injection of caspase-8 inhibitor, Z-IETD-fmk, decreased the production of phosphor-NF- $\kappa$ B p65, obviously (h). Data are shown as mean  $\pm$  SD. \*P < 0.05, \*\*P < 0.01 vs sham group Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/26224068>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Schultz V, Barrie JA, Donald CL et al. Oligodendrocytes are susceptible to Zika virus infection in a mouse model of perinatal exposure: Implications for CNS complications *Glia* 2021-08-01 [PMID: 33942402]

Chen XC, Wu D, Wu HL et al. Metformin improves renal injury of MRL/lpr lupus-prone mice via the AMPK/STAT3 pathway *Lupus Science & Medicine* 2022-04-11 [PMID: 35414608]

Chi W, Hua X, Chen X et al. Mitochondrial DNA oxidation induces imbalanced activity of NLRP3/NLRP6 inflammasomes by activation of caspase-8 and BRCC36 in dry eye. *J. Autoimmun.* 2017-02-23 [PMID: 28238526]

López-Cervantes M, Quintanar-Stephano A, Alcauter-Solórzano S, Hernández-Pando R et Al. Cerebellar spongiform degeneration is accompanied by metabolic, cellular, and motor disruption in male rats with portacaval anastomosis *J Neurosci Res* 2021-06-01 [PMID: 34061383]

Huang, XR;Ye, L;An, N;Wu, CY;Wu, HL;Li, HY;Huang, YH;Ye, QR;Liu, MD;Yang, LW;Liu, JX;Tang, JX;Pan, QJ;Wang, P;Sun, L;Xia, Y;Lan, HY;Yang, C;Liu, HF; Macrophage autophagy protects against acute kidney injury by inhibiting renal inflammation through the degradation of TARM1 *Autophagy* 2024-08-28 [PMID: 39193910]

Lee SM, Kim SH, Kim Z et Al. Photodynamic Effects of Topical Photosensitizer, Photodithazine Using Micro-LED for Acne Bacteria Induced Inflammation *Ann Dermatol* 2024-12-01 [PMID: 39623608]

Miyauchi T, Uchida Y, Kadono K et al. Up-regulation of FOXO1 and reduced inflammation by beta-hydroxybutyric acid are essential diet restriction benefits against liver injury *Proc. Natl. Acad. Sci. U.S.A.* 2019-07-02 [PMID: 31196960]

Wu F, Wei H, Hu Y et al. Upregulation of P2X7 Exacerbates Myocardial Ischemia-Reperfusion Injury through Enhancing Inflammation and Apoptosis in Diabetic Mice *Journal of immunology (Baltimore, Md. : 1950)* 2023-05-05 [PMID: 37144844] (WB, Mouse)

Details:

1:1000 WB dilution

Yu Z, Yazdanpanah G, Alam J et al. Induction of Innate Inflammatory Pathways in the Corneal Epithelium in the Desiccating Stress Dry Eye Model *Investigative ophthalmology & visual science* 2023-04-03 [PMID: 37036417] (WB, Mouse)

Gupta A, Singh K, Fatima S et al. Neutrophil Extracellular Traps Promote NLRP3 Inflammasome Activation and Glomerular Endothelial Dysfunction in Diabetic Kidney Disease *Nutrients* 2022-07-20 [PMID: 35889923] (WB, Mouse)

Details:

1:1000 WB dilution

Jin L, Jin F, Guo S et al. Metformin Inhibits NLR Family Pyrin Domain Containing 3 (NLRP)-Relevant Neuroinflammation via an Adenosine-5-Monophosphate-Activated Protein Kinase (AMPK)-Dependent Pathway to Alleviate Early Brain Injury After Subarachnoid Hemorrhage in Mice *Frontiers in Pharmacology* 2022-03-17 [PMID: 35370693] (IF/IHC, Mouse)

Yu, C, Chen, P Et al. hADSCs derived extracellular vesicles inhibit NLRP3inflammasome activation and dry eye. *Sci Rep* 2020-09-03 [PMID: 32884023] (WB, Mouse)

More publications at <http://www.novusbio.com/NBP1-77080>



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### Products Related to NBP1-77080

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NBP1-77080PEP	NLRP3/NALP3 Antibody Blocking Peptide
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

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### 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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