Product Datasheet

Caspase-11 Antibody (17D9) - BSA Free NB120-10454

Unit Size: 0.1 ml

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

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NB120-10454

Caspase-11 Antibody (17D9) - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	17D9
Preservative	0.02% Sodium Azide
Isotype	IgG2a
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	35-43 kDa
Product Description	
Host	Rat
Gene ID	12363
Gene Symbol	Casp4
Species	Human, Mouse, Rat, Bovine
Reactivity Notes	Use in Rat reported in scientific literature (PMID:32318575). Use in Bovine reported in scientific literature (PMID:31156617).
Immunogen	A recombinant p30 subunit of mouse Caspase 11. [UniProt# P70343]
Product Application Details	
Applications	Western Blot, ELISA, Flow Cytometry, Immunoblotting, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Microarray, Knockdown Validated, Knockout Validated
Recommended Dilutions	Western Blot 5 ug/ml, Flow Cytometry reported in scientific literature (PMID 27708283), ELISA, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:100, Immunoprecipitation reported in scientific literature (PMID 10791975), Immunohistochemistry-Paraffin 1:100, Immunohistochemistry-Frozen 1:10-1:500, Immunoblotting reported in scientific literature (PMID 28345580), Microarray, Knockout Validated, Knockdown Validated

Images

Western Blot: Caspase-11 Antibody (17D9) [NB120-10454] - Mouse liver extract was separated on a 4-15% gel and transfered to PVDF membrane. The membrane was probed with anti-caspase 11 antibody and detected with an anti-rat HRP secondary antibody. Both procaspase 11 and fully cleaved caspase 11 are detected.



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Immunohistochemistry-Paraffin: Caspase-11 Antibody (17D9) [NB120-10454] - IHC-P analysis of a formalin fixed paraffin embedded tissue section of mouse lung using Caspase 11 antibody (clone 17D9) at 1:100 diluton. The antibody generated cytoplasmic signal with more intense staining in the bronchiolar epithelium while the staining signal in alveolar cells was relatively low.



Western Blot: Caspase-11 Antibody (17D9) [NB120-10454] - Analysis of Caspase-11 in THP-1 cell lysates that were untreated (left lane) or treated (right lane) with 100 ng/ml LPS. Image from verified customer review.



Immunocytochemistry/Immunofluorescence: Caspase-11 Antibody (17D9) [NB120-10454] - Caspase 11 antibody was tested in NIH-3T3 cells at a 1:100 dilution using a Dylight 488 conjugated secondary antibody (Green). Actin (Red) and DNA (Blue) were counterstained using Phalloidin 568 and DAPI.

Western Blot: Caspase-11 Antibody (17D9) [NB120-10454] - Caspase 11 Antibody (17D9) [NB120-10454] - analysis of Caspase 11 in LPS stimulated bone marrow derived macrophages using anti-Caspase 11 antibody. Image from verified customer review.





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Western Blot: Caspase-11 Antibody (17D9) - BSA Free [NB120-10454] - B GBP2 & IRGB10 regulates caspase-11 mediated non-canonical NLRP3 activation & pyroptosis.a Microscopic analysis of cell death in unprimed WT, Gbp2-/-, Gbp5-/-, Gbpchr3-KO, Irgb10-/-, Irgb10-/-Gbpchr3-KO, Caspase11-/- & NIrp3-/- BMDMs infected with popB (MOI 10) for 16 h. (Scale, 15 µm). Arrow heads indicate pyroptotic cells. b-e Immunoblot analysis of caspase-1, IL-1 β , IL-18, & IL-6 release in WT, Gbp2-/-, Gbp5-/-, Gbpchr3-KO, Irgb10-/-, Irgb10-/-Gbpchr3-KO, Caspase11-/ - & NIrp3-/- BMDMs infected with popB (MOI10). f Bacterial CFU in unprimed WT, Gbp2-/-, Gbp5-/-, Gbpchr3-KO, Irgb10-/-, Irgb10-/ -Gbpchr3-KO, Caspase11-/- & NIrp3-/- BMDMs infected with popB (MOI10), 4 h & 16 h. Data are representative of three independent experiments. ns-not significant, *p < 0.05, **p < 0.01, ***p < 0.001, ***p < 0.0001 (two-tailed T test) Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/30062052), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Flow Cytometry: Caspase-11 Antibody (17D9) - BSA Free [NB120-10454] - The expression of circHIPK3 in serum samples of patients with AP & in caerulein-stimulated pancreatic acinar cells. (A) QPCR was performed to detect circHIPK3 expression in serum samples of patients with AP & healthy subjects. MAP, mild acute pancreatitis; SAP, severe Acute Pancreatitis. (B) CCK8 assay was performed to measure the cell viability in AR42J cells after caerulein treatment. (C) Levels of inflammatory cytokines IL-1 β , IL-6, IL-8, & TNF- α were measured by ELISA kits in culture medium after caerulein treatment. (D) Amylase activity was measured by ELISA kit in AR42J cells after caerulein treatment. (E) The pyroptosis-related proteins caspase 1 & caspase 11 were analyzed by immunoblot in AR42J cells after caerulein treatment. (F) PI staining was performed in AR42J cells after caerulein treatment, & the PI-positive cells were counted. (G) Flow-cytometric analysis of caspase-1/11+PI+ cells in AR42J cells after caerulein treatment. Data are presented as a representative plot (upper) & quantified percentages (lower). (H) circHIPK3 expression was determined by qPCR in AR42J cells after caerulein treatment. *p < 0.05. Image collected & cropped by CiteAb from the following publication

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Publications

Abhimanu Pandey, Cheng Shen, Shouya Feng, Daniel Enosi Tuipulotu, Chinh Ngo, Cheng Liu, Melan Kurera, Anukriti Mathur, Shweta Venkataraman, Jing Zhang, Dipti Talaulikar, Renhua Song, Justin J.-L. Wong, Narci Teoh, Nadeem O. Kaakoush, Si Ming Man Ku70 senses cytosolic DNA and assembles a tumor-suppressive signalosome Science Advances 2024-01-26 [PMID: 38277448]

Exconde, PM;Hernandez-Chavez, C;Bourne, CM;Richards, RM;Bray, MB;Lopez, JL;Srivastava, T;Egan, MS;Zhang, J;Yoo, W;Shin, S;Discher, BM;Taabazuing, CY; The tetrapeptide sequence of IL-18 and IL-1? regulates their recruitment and activation by inflammatory caspases Cell reports 2023-12-15 [PMID: 38103201]

Flavia Mazzarda, Alexandra E Chittams-Miles, Julia Pittaluga, Esin B Sözer, P Thomas Vernier, Claudia Muratori Inflammasome Activation and IL-1β Release Triggered by Nanosecond Pulsed Electric Fields in Murine Innate Immune Cells and Skin. Journal of immunology (Baltimore, Md. : 1950) 2024-02-05 [PMID: 38047899]

Li F, Li Y, Liang H et al. HECTD3 mediates TRAF3 polyubiquitination and type I interferon induction during bacterial infection J. Clin. Invest. 2018-06-19 [PMID: 29920190]

Larissa M. N. Pereira, Patrícia A. Assis, Natalia M. de Araújo, Danielle F. Durso, Caroline Junqueira, Marco Antônio Ataíde, Dhelio B. Pereira, Egil Lien, Katherine A. Fitzgerald, Dario S. Zamboni, Douglas T. Golenbock, Ricardo T. Gazzinelli Caspase-8 mediates inflammation and disease in rodent malaria Nature Communications 2020-09-14 [PMID: 32929083]

Kylene P. Daily, Asmaa Badr, Mostafa Eltobgy, Shady Estfanous, Owen Whitham, Michelle H. Tan, Cierra Carafice, Kathrin Krause, Andrew McNamara, Kaitlin Hamilton, Samuel Houle, Spandan Gupta, Gauruv A. Gupta, Shruthi Madhu, Julie Fitzgerald, Abbey A. Saadey, Brooke Laster, Pearlly Yan, Amy Webb, Xiaoli Zhang, Maciej Pietrzak, Olga N. Kokiko-Cochran, Hazem E. Ghoneim, Amal O. Amer DNA hypomethylation promotes the expression of CASPASE-4 which exacerbates inflammation and amyloid-β deposition in Alzheimer's disease Alzheimer's Research & Therapy 2024-02-08 [PMID: 38326859]

Huairui Shi, Yang Gao, Zhen Dong, Ji'e Yang, Rifeng Gao, Xiao Li, Shuqi Zhang, Leilei Ma, Xiaolei Sun, Zeng Wang, Feng Zhang, Kai Hu, Aijun Sun, Junbo Ge GSDMD-Mediated Cardiomyocyte Pyroptosis Promotes Myocardial I/R Injury Circulation Research 2021-06-15 [PMID: 34015941]

Noriyuki Watanabe, Riyoko Tamai, Yusuke Kiyoura Alendronate augments lipid A□induced IL□1β release by ASC□deficient RAW264 cells via AP□1 activation Experimental and Therapeutic Medicine 2023-12-01 [PMID: 38023354]

Joo-Hui Han, Rajendra Karki, R K Subbarao Malireddi, Raghvendra Mall, Roman Sarkar, Bhesh Raj Sharma, Jonathon Klein, Harmut Berns, Harshan Pisharath, Shondra M Pruett-Miller, Sung-Jin Bae, Thirumala-Devi Kanneganti NINJ1 mediates inflammatory cell death, PANoptosis, and lethality during infection conditions and heat stress. Nature communications 2024-02-28 [PMID: 38409108]

Do-Wan Shim, Jun-Cheol Eo, Saeyoung Kim, Inhwa Hwang, BoYoung Nam, Jae-Eun Shin, Seung Hyeok Han, Je-Wook Yu Deficiency of circadian clock gene Bmal1 exacerbates noncanonical inflammasome-mediated pyroptosis and lethality via Rev-erbα-C/EBPβ-SAA1 axis Experimental & Molecular Medicine 2024-02-01 [PMID: 38297162]

Fei Gao, Dian Xiong, Zhaorui Sun, Jingbo Shao, Dong Wei, Shinan Nie ARC DPBNPs suppress LPS-induced acute lung injury via inhibiting macrophage pyroptosis and M1 polarization by ERK pathway in mice. International immunopharmacology 2024-04-10 [PMID: 38457983]

Watanabe N, Tamai R, Kiyoura Y Alendronate augments lipid A?induced IL?1? release by ASC?deficient RAW264 cells via AP?1 activation Experimental and Therapeutic Medicine 2023-10-26 (WB, Human)

More publications at http://www.novusbio.com/NB120-10454



Procedures

Western Blot Protocol for Caspase-11 Antibody (NB120-10454)

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 1% BSA 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.

Immunocytochemistry/ Immunofluorescence Protocol for Caspase-11 Antibody (NB120-10454) Immunocytochemistry Protocol

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

1. Remove culture medium and wash the cells briefly in PBS. Add 10% formalin to the dish and fix at room temperature for 10 minutes.

2. Remove the formalin and wash the cells in PBS.

3. Permeablize the cells with 0.1% Triton X100 or other suitable detergent for 10 min.

4. Remove the permeablization buffer and wash three times for 10 minutes each in PBS. Be sure to not let the specimen dry out.

5. To block nonspecific antibody binding, incubate in 10% normal goat serum from 1 hour to overnight at room temperature.

6. Add primary antibody at appropriate dilution and incubate overnight at 4C.

7. Remove primary antibody and replace with PBS. Wash three times for 10 minutes each.

8. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.

9. Remove secondary antibody and replace with PBS. Wash three times for 10 minutes each.

10. Counter stain DNA with DAPi if required.





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Products Related to NB120-10454

NBP3-11853	Jurkat Staurosporine Treated / Untreated Cell Lysate
HAF005	Goat anti-Rat IgG Secondary Antibody [HRP]
NBP1-75398	Goat anti-Rat IgG (H+L) Secondary Antibody (Pre-adsorbed)
NBP2-21947-0.1mg	Rat IgG2a Isotype Control (2A3)

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