Product Datasheet

CD11b Antibody - BSA Free NB110-89474

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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Updated 9/11/2024 v.20.1

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NB110-89474

CD11b Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	127.2 kDa
Product Description	
Host	Rabbit
Gene ID	3684
Gene Symbol	ITGAM
Species	Human, Mouse, Rat, Bovine, C. elegans, Chinese Hamster, Monkey, Rhesus Macaque
Reactivity Notes	Use in Mouse reported in scientific literature (PMID:35398596).Monkey reactivity reported in scientific literature (PMID: 26443820). Rhesus Macaque reactivity reported in scientific literature (PMID: 29760177). Use in C. elegans reported in scientific literature (PMID:32058942).
Marker	Microglia Marker, Myeloid Marker
Immunogen	Rabbit Polyclonal CD11b Antibody was made to a synthetic peptide within residues 250-350 of the mouse CD11b protein. [Swiss-Prot# P05555]
Product Application Details	
Applications	Western Blot, Simple Western, Flow Cytometry, Flow (Cell Surface), Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, In-situ Hybridization, Dual RNAscope ISH-IHC, Single Cell Western
Recommended Dilutions	Western Blot 2 ug/mL. Use reported in scientific literature (PMID 31082627), Simple Western 1:50, Flow Cytometry reported in scientific literature (PMID 21422470), Immunohistochemistry 1:400, Immunocytochemistry/ Immunofluorescence 1:200. Use reported in multiple pieces of scientific literature (PMID 23980916), Immunohistochemistry-Paraffin 1:400. Use reported in scientific literature (PMID 31022918), Immunohistochemistry-Frozen reported in scientific literature (PMID 23980916), In-situ Hybridization reported in scientific literature (PMID 27133471), Flow (Cell Surface) 1:10 - 1:1000, Single Cell Western 1:10, Dual RNAscope ISH-IHC
Application Notes	In WB a specific band is observed ~160 kDa and an apparant non-specific band is observed ~56 kDa. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. In ICC/IF, membrane staining was observed in Raw 264.7 cells. This antibody does not appear to work in human samples with WB. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.







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CD20

H&E

CD45

Immunohistochemistry: CD11b Antibody - BSA Free [NB110-89474] -Glibenclamide and Abcc8-/- suppress immune cell infiltration in EAE. White matter of lumbar spinal cord sections from WT control (a), untreated pid-30 WT/EAE (b), glibenclamide-treated pid-30 WT/EAE (c), and pid-30 Abcc8-/-/EAE (d) mice, stained with H&E or immunolabeled for CD45 (leucocyte), CD3 (T cells), CD20 (B cells), or CD11b (macrophage/microglia), as indicated; original magnification, x200 (H&E) or x400 (all immunolabelings). eleft panel: percent of quadrants with inflammatory cells on H&E; four mice/group. efour right panels: Quantification of CD-45-, CD3-, CD20-, and CD11b-expressing cells in white matter; four mice/group; ##P < 0.01 with respect to WT control; * < 0.01, and ***P < 0.001 with respect to WT/EAE; scale bars, 100 um Image collected and cropped by CiteAb from the following publication (https://www.jneuroinflammation.com/content/12/1/210) licensed under a CC-BY license.

Flow (Cell Surface): CD11b Antibody - BSA Free [NB110-89474] -

89474AF405). Image from verified customer review.

Surface staining of CD11b in CT26 colorectal carcinoma tumor model. Using Alexa Fluor 405 conjugated version of the antibody (NB110-

CD3 CD11b



Immunocytochemistry/Immunofluorescence: CD11b Antibody - BSA Free [NB110-89474] - Raw264.7 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with CD11b Antibody conjugated to Alexa Fluor 647 (NB110-89474AF647) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.

Immunocytochemistry/Immunofluorescence: CD11b Antibody - BSA Free [NB110-89474] - Raw264.7 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.05% Triton X-100 in PBS for 5 minutes. The cells were incubated with CD11b Antibody conjugated to DyLight 650 (NB110-8947C) at 5 ug/ml for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



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Immunocytochemistry/Immunofluorescence: CD11b Antibody - BSA Free [NB110-89474] - CD11b Antibody [NB110-89474] - CD11b antibody [NB110-89474] was tested in Raw264.7 cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with 4',6-diamidino-2phenylindole (DAPI) (blue) and DyLight 550 (red). Immunohistochemistry: CD11b Antibody - BSA Free [NB110-89474] -С Population of CD11b + myeloid progenitor cells differentiate into SMA + stromal cells within tumors and in vitro. Representative image of CD11b + SMA + double positive cells within tumor stroma. Image collected and cropped by CiteAb from the following publication (//pubmed.ncbi.nlm.nih.gov/32731354/) licensed under a CC-BY license. Immunohistochemistry: CD11b Antibody - BSA Free [NB110-89474] -Immunohistochemical analysis of CD11b in human renal cancer with [NB110-89474] using 3,3'-Diaminobenzidine (DAB) with hematoxylin counterstain. Immunohistochemistry-Frozen: CD11b Antibody - BSA Free [NB110-89474] - Immunohistochemical analysis of frozen sections of mouse spleen using [NB110-89474]. IHC-Fr image submitted by a verified customer review.



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Dual RNAscope ISH-IHC: CD11b Antibody - BSA Free [NB110-89474] -Formalin-fixed paraffin-embedded tissue sections of human lymph node were probed for CD11b mRNA (ACD RNAScope Probe, catalog #555098; Fast Red chromogen, ACD catalog # 322750). Adjacent tissue section was processed for immunohistochemistry using Rabbit Polyclonal (Novus Biologicals catalog #NB110-89474) at 1:50 dilution with 1 hour incubation at room temperature followed by incubation with anti-rabbit IgG VisUCyte HRP Polymer Antibody (Catalog # VC003) and DAB chromogen (yellow-brown). Tissue was counterstained with hematoxylin (blue). Specific staining was localized to lymphocytes.

Dual RNAscope ISH-IHC: CD11b Antibody - BSA Free [NB110-89474] -CD14 mRNA (red) and CD11b protein (green) were detected in formalinfixed paraffin-embedded tissue sections of human malignant lymph node. ACD's Integrated Co-Detection Workflow was performed using ACD RNAScope Probe Hs-CD14 and CD11b antibody at 1:200 dilution. Tissue was stained on Leica Bond RX using RNAscope (TM) 2.5 LS Reagent Kit-RED, BOND Polymer Refine Detection (DAB) and Hematoxylin, BOND Polymer Refine Red Detection and Hematoxylin and RNA scope (TM) 2.5 LS Green Accessory Pack. Tissue was counterstained with 50% hematoxylin (blue).

CD11b staining in IMhu. Cells were stained with antibodies against the CD11b surface antigen. (A) Panel A shows positive staining for CD11b and (B) panel B shows nuclear DAPI staining. Magnitude 40×.

Western Blot: CD11b Antibody - BSA Free [NB110-89474] -Immunodensities of (a) CD11b, (b) GFAP & (c) NF- κ B (p65) proteins with representative immunoblots in striatum from Munc18-OE (n = 5) & wild-type (n = 5) mice. Bar graphs are ratios of optical densities of our proteins of interest to β -actin (42 kDa band), expressed as immunoreactivity in percentage of mean value of the WT group (100%). No differences were detected between groups for any of the analyzed proteins. Right panels are representative immunoblots for target proteins & β -actin which included Munc18-OE (OE) & wild-type (WT) mice samples. The molecular masses were estimated from referenced standards. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/25069615), licensed under a CC-BY license. Not internally tested by Novus Biologicals.









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Publications

Jorfi M, Park J, Hall CK et al. Infiltrating CD8+ T cells exacerbate Alzheimer's disease pathology in a 3D human neuroimmune axis model Nature neuroscience 2023-09-01 [PMID: 37620442]

Ruiz-Bedoya CA, Mota F, Ordonez AA et al. (124)I-Iodo-DPA-713 Positron Emission Tomography in a Hamster Model of SARS-CoV-2 Infection Molecular Imaging and Biology 2022-02-01 [PMID: 34424479] (Flow Cytometry)

He J, Wang K, Liu M et al. ?-hydroxybutyrate enhances bovine neutrophil adhesion by inhibiting autophagy Frontiers in Immunology 2023-01-11 [PMID: 36713365] (Western Blot)

Tomasz W Kaminski, Omika Katoch, Ziming Li, Corrine B Hanway, Rikesh K Dubey, Adekunle Alagbe, Tomasz Brzoska, Hong Zhang, Prithu Sundd, Gregory J Kato, Enrico M Novelli, Tirthadipa Pradhan-Sundd Impaired hemoglobin clearance by sinusoidal endothelium promotes vaso-occlusion and liver injury in sickle cell disease. Haematologica 2023-11-09 [PMID: 37941440]

Hojin Park, Somin Oh, Young Sam Kim, Clifford L. Spiro, Joon Pio Hong, Jong Woo Choi Effects of an Ultra-Polished Scalpel on Incisional Wounds in a Diabetic Model The Journal of Craniofacial Surgery 2024-01-01 [PMID: 38270441]

Noosha Yousefpour, Samantha Locke, Haley Deamond, Chengyang Wang, Lucas Marques, Manon St-Louis, Johanne Ouellette, Arkady Khoutorsky, Yves De Koninck, Alfredo Ribeiro-da-Silva Time-dependent and selective microglia-mediated removal of spinal synapses in neuropathic pain. Cell reports 2023-02-06 [PMID: 36656715]

Lillian Yang, John H Martin Effects of motor cortex neuromodulation on the specificity of corticospinal tract spinal axon outgrowth and targeting in rats. Brain stimulation 2023-06-26 [PMID: 37094762]

Snyder B, Duong P, Trieu J, Cunningham RL. Androgens modulate chronic intermittent hypoxia effects on brain and behavior. Horm Behav. 2018-10-06 [PMID: 30268884]

Thangaraj, A;Periyasamy, P;Guo, ML;Chivero, ET;Callen, S;Buch, S; Mitigation of cocaine-mediated mitochondrial damage, defective mitophagy and microglial activation by superoxide dismutase mimetics Autophagy 2019-04-16 [PMID: 30990365]

L Zhao, R Zhang, F Su, L Dai, J Wang, J Cui, W Huang, S Zhang FoxC1-Induced Vascular Niche Improves Survival and Myocardial Repair of Mesenchymal Stem Cells in Infarcted Hearts Oxid Med Cell Longev, 2020-07-04;2020 (0):7865395. 2020-07-04 [PMID: 32963702]

da Silveira BP, Barhoumi R, Bray JM et al. Impact of surface receptors TLR2, CR3, and Fc?RIII on Rhodococcus equi phagocytosis and intracellular survival in macrophages Infection and immunity 2023-11-29 [PMID: 38018994]

Richards T, Perron JC, Patel K et al. Therapeutic Intervention of Neuroinflammatory Alzheimer Disease Model by Inhibition of Classical Complement Pathway with the Use of Anti-C1r Loaded Exosomes Research square 2023-10-18 [PMID: 37886595] (ICC/IF, IHC, Rat)

Details: ICC/IF dilution 1:200; IHC dilution 1:500

More publications at http://www.novusbio.com/NB110-89474



Procedures

Western Blot protocol for CD11b Antibody (NB110-89474)

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 ug of total protein per lane.

2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.

3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.

4. Rinse the blot.

5. Block the membrane using standard blocking buffer for at least 1 hour.

6. Wash the membrane in wash buffer three times for 10 minutes each.

7. Dilute primary antibody in blocking buffer and incubate 1 hour at room temperature.

8. Wash the membrane in wash buffer three times for 10 minutes each.

9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.

10. Wash the blot in wash buffer 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 manufacturers instructions.

**Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

Immunohistochemistry-Paraffin protocol for CD11b Antibody (NB110-89474) 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 4C.
- 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 CD11b Antibody (NB110-89474)

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.





Novus Biologicals USA

10730 E. Briarwood Avenue Centennial, CO 80112 USA Phone: 303.730.1950 Toll Free: 1.888.506.6887 Fax: 303.730.1966 nb-customerservice@bio-techne.com

Bio-Techne Canada

21 Canmotor Ave Toronto, ON M8Z 4E6 Canada Phone: 905.827.6400 Toll Free: 855.668.8722 Fax: 905.827.6402 canada.inquires@bio-techne.com

Bio-Techne Ltd

19 Barton Lane Abingdon Science Park Abingdon, OX14 3NB, United Kingdom Phone: (44) (0) 1235 529449 Free Phone: 0800 37 34 15 Fax: (44) (0) 1235 533420 info.EMEA@bio-techne.com

General Contact Information

www.novusbio.com Technical Support: nb-technical@biotechne.com Orders: nb-customerservice@bio-techne.com General: novus@novusbio.com

Products Related to NB110-89474

NBP1-30158	Raw 264.7 Whole Cell - T0901317 treated Whole Cell Lysate
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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