Product Datasheet

Integrin beta 1/CD29 Antibody (P4C10) - BSA Free
NBP2-36561

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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Publications: 13

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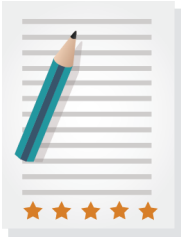
Updated 9/9/2025 v.20.1



NBP2-36561

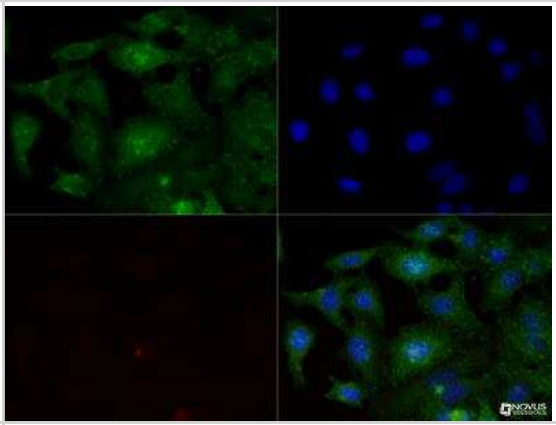
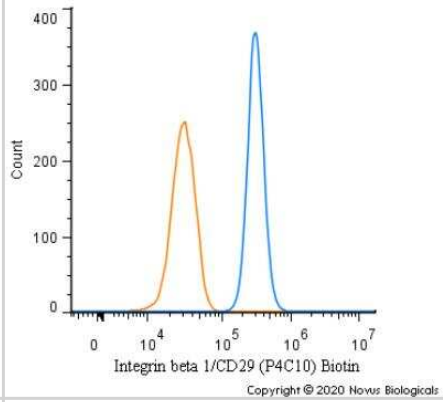
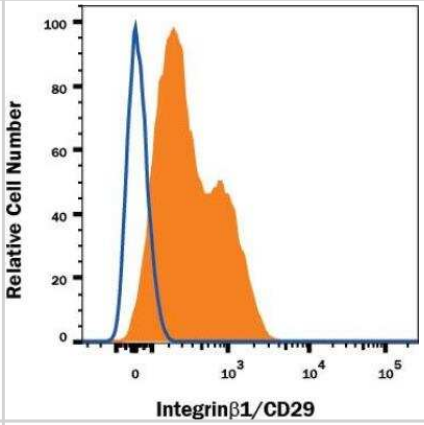
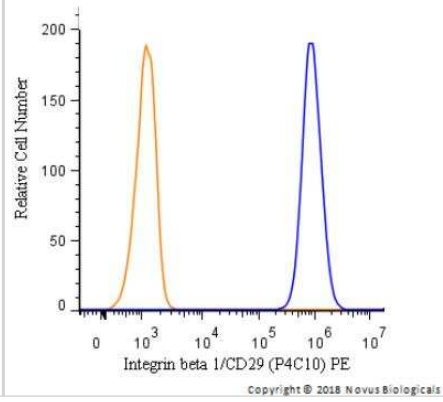
Integrin beta 1/CD29 Antibody (P4C10) - BSA Free

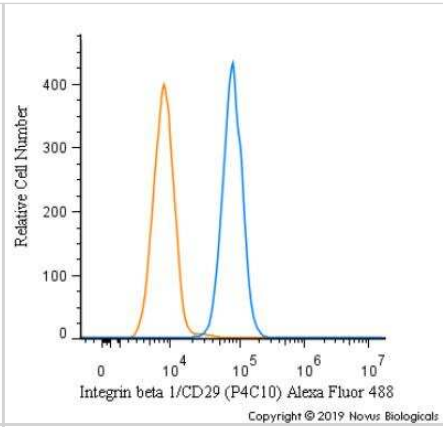
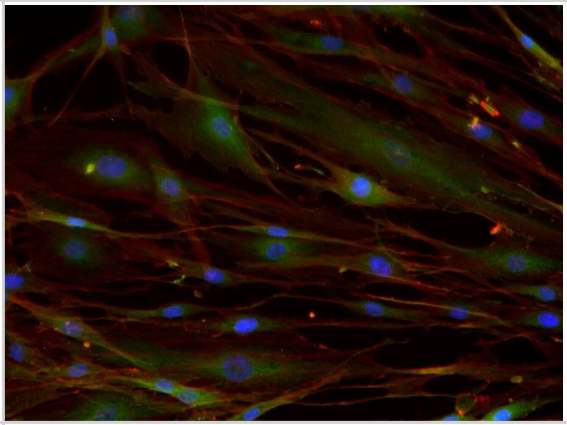
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	P4C10
Preservative	0.02% Sodium Azide
Isotype	IgG1
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	88 kDa

Product Description	
Description	Novus Biologicals Mouse Integrin beta 1/CD29 Antibody (P4C10) - BSA Free (NBP2-36561) is a monoclonal antibody validated for use in IHC, WB, ELISA, Flow, ICC/IF and IP. Anti-Integrin beta 1/CD29 Antibody: Cited in 13 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	3688
Gene Symbol	ITGB1
Species	Human, Mouse
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID:32803867). Mouse reactivity reported in scientific literature (PMID: 27550917). .
Specificity/Sensitivity	Epitope is not trypsin sensitive.
Immunogen	HT1080 cells human fibrosarcoma

Product Application Details	
Applications	Western Blot, ELISA, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation, Block/Neutralize
Recommended Dilutions	Western Blot reported in scientific literature (PMID 27550917), Flow Cytometry 1:10, ELISA, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence 1:10-1:100, Immunoprecipitation, Immunohistochemistry-Frozen 1:10-1:100, Block/Neutralize
Application Notes	For ICC/IF ,methanol fixation is recommended. The P4C10 antibody inhibits endodermal cell and keratinocyte attachment to collagen type 1, fibronectin and laminin; also inhibits cell-cell adhesion. This product does contain sodium azide, so we highly recommend performing a buffer exchange or dialyzation prior to incubating with live cells.

Images

Immunocytochemistry/Immunofluorescence: Integrin beta 1/CD29 Antibody (P4C10) [NBP2-36561] - Integrin beta 1 (P4C10) antibody was tested in -20 degree MeOH fixed HeLa cells at a 1:200 dilution against DyLight 488 (green). Actin and nuclei were counterstained against Phalloidin 568 (red) and DAPI (blue), respectively.	
Flow Cytometry: Integrin beta 1/CD29 Antibody (P4C10) [NBP2-36561] - An intracellular stain was performed on A431 cells with Integrin beta 1/CD29 [P4C10] Antibody NBP2-36561B (blue) and a matched isotype control (orange). Both antibodies were conjugated to Biotin. Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature, followed by Streptavidin - R-Phycoerythrin Protein (2012-1000, Novus Biologicals).	
Flow Cytometry: Integrin beta 1/CD29 Antibody (P4C10) [NBP2-36561]	
Flow Cytometry: Integrin beta 1/CD29 Antibody (P4C10) [NBP2-36561] - A surface stain was performed on HeLa cells with Integrin beta 1/CD29 [P4C10] Antibody NBP2-36561PE (blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 2.5 ug/mL for 20 minutes at room temperature. Both antibodies were conjugated to Phycoerythrin.	

Flow Cytometry: Integrin beta 1/CD29 Antibody (P4C10) [NBP2-36561] - A surface stain was performed on HeLa cells with Integrin beta 1/CD29 [P4C10] Antibody NBP2-36561AF488 (blue) and a matched isotype control (orange). Cells were incubated in an antibody dilution of 5 ug/mL for 20 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 488.	
Immunocytochemistry/Immunofluorescence: Integrin beta 1/CD29 Antibody (P4C10) [NBP2-36561] - Overnight incubation with 1:50 Integrin beta 1/CD29 primary antibody in PBS/BSA 1%, at 4ºC. Green: Integrin beta 1/CD29 Antibody (P4C10), Red: Phalloidin, Blue: DAPI. Image from verified customer review.	
Generation and characterization of ADSC-EVs and ADSC-NVs. A TEM images of ADSC-EVs and ADSC-NVs. Scale bar: 100 nm. B NTA analysis of ADSC-EVs and ADSC-NVs. The peak diameter of both ranged between 100 and 150 nm. C, D The yields of EVs and NVs from equivalent ADSCs were examined by particle number (C) and the protein amount (D) (n = 3 per group). E Protein expression of TSG101, CD81, and CD29 was assessed by western blot analysis for ADSC-EVs (EVs), ADSC-NVs (NVs), and ADSC. F-H The internalization of PKH26-labeled ADSC-EVs and ADSC-NVs in equivalent amount particles by HUVECs was evaluated at 1, 2, 3 and 4 h respectively. The internalization rate (F) was measured by calculating area ratio between ADSC-EVs/ ADSC-NVs and HUVECs (n = 3 per group). G, H Representative images of internalization of ADSC-EVs or ADSC-NVs at 1, 2, 3, 4 h. Scale bar: 100 μm. Red: ADSC-EVs/NVs, Green: HUVECs, blue: Nucleus of HUVECs. ns, no significant difference, ***p < 0.001, ****p < 0.0001 Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/36528594), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Sun D, Mou S, Chen L et al. High yield engineered nanovesicles from ADSC with enriched miR-21-5p promote angiogenesis in adipose tissue regeneration Biomaterials research 2022-12-17 [PMID: 36528594] (WB, Human)

Xing Y, Li XK, Lu SD, Ma J Regulation of opticin on bioactivity of retinal vascular endothelial cells cultured in collagen Int J Ophthalmol 2020-08-18 [PMID: 32821673] (WB, Human)

Zhang Z, Hu P, Wang Z et al. BDNF promoted osteoblast migration and fracture healing by up-regulating integrin beta 1 via TrkB-mediated ERK1/2 and AKT signalling J. Cell. Mol. Med. 2020-08-16 [PMID: 32803867] (IF/IHC, Mouse)

Shen L, Ke Q, Chai J et al. PAG1 promotes the inherent radioresistance of laryngeal cancer cells via activation of STAT3 Exp. Cell Res. 2018-06-18 [PMID: 29913153] (B/N, Human)

Li S, Xiong N, Peng Y et al. Acidic pHe regulates cytoskeletal dynamics through conformational integrin b1 activation and promotes membrane protrusion. Biochim. Biophys. Acta 2018-04-23 [PMID: 29698684] (B/N)

Pinnington SJL, Marshall JF, Wheeler AP. Correlative 3D Structured Illumination Microscopy and Single-Molecule Localization Microscopy for Imaging Cancer Invasion. Methods Mol. Biol. 2018-04-02 [PMID: 29605919] (Human)

Fan D, Takawale A, Shen M et al. A Disintegrin and Metalloprotease-17 Regulates Pressure Overload-Induced Myocardial Hypertrophy and Dysfunction Through Proteolytic Processing of Integrin beta1. Hypertension. 2016-08-22 [PMID: 27550917] (WB, Mouse)

Li E, Brown SL, Stupack DG et al. Integrin alpha(v)beta1 is an adenovirus coreceptor. J Virol. 2001-06-01 [PMID: 11333925] (FLOW, IP, Human)

Kovach NL, Carlos TM, Yee E, Harlan JM. A monoclonal antibody to beta 1 integrin (CD29) stimulates VLA-dependent adherence of leukocytes to human umbilical vein endothelial cells and matrix components. J Cell Biol. 1992-01-01 [PMID: 1370496] (FLOW, IP, Human)

Mitjans F, Sander D, Adan J et al. An anti-alpha v-integrin antibody that blocks integrin function inhibits the development of a human melanoma in nude mice. J Cell Sci. 1995-08-01 [PMID: 7593323] (FLOW, ELISA, IP, Human)

Takada Y, Puzon W. Identification of a regulatory region of integrin beta 1 subunit using activating and inhibiting antibodies. J Biol Chem. 1993-08-15 [PMID: 7688727] (FLOW, B/N, Human)

Beausejour M, Noel D, Thibodeau S et al. Integrin/Fak/Src-mediated regulation of cell survival and anoikis in human intestinal epithelial crypt cells: selective engagement and roles of PI3-K isoform complexes. Apoptosis. 2012-06-01 [PMID: 22402981] (B/N, Human)

More publications at http://www.novusbio.com/NBP2-36561

Procedures

Flow (Cell Surface) Protocol for Integrin beta 1/CD29 Antibody (NBP2-36561)
Protocol for Flow Cytometry Cell Surface Staining
Sample Preparation.
1. Grow cells to 60-85% confluency. Flow cytometry requires between 2 x 105 and 1 x 106 cells for optimal performance.
2. If cells are adherent, harvest gently by washing once with staining buffer and then scraping. Avoid using trypsin as this can disrupt certain epitopes of interest. If enzymatic harvest is required, use Accutase, Collagenase, or TrypLE Express for a less damaging option.
3. Reserve 100 uL for counting, then transfer cell volume into a 15 mL conical tube and centrifuge for 4 minutes at 400 RCF.
a. Count cells using a hemocytometer and a 1:1 trypan blue exclusion stain to determine cell viability before starting the flow protocol. If cells appear blue, do not proceed.
4. Re-suspend cells to a concentration of 1 x 106 cells/mL in staining buffer (NBP2-26247).
5. Aliquot out 100 uL samples in accordance with your experimental samples.

Tip: When cell surface and intracellular staining are required in the same sample, it is advisable that the cell surface staining be performed first since the fixation and permeablization steps might reduce the availability of surface antigens.
Cell surface staining
1. Recommended: Block non-specific interactions using 0.5-1 ug of a species specific Fc-blocking reagent such as an anti-mouse CD16/CD32 antibody (NBP1-27946).
2. Add appropriate amount of each antibody (eg. 1 test or 1 ug per sample, as experimentally determined) to 100 uL of staining buffer (NBP2-26247) per sample (eg. use 1 mL of staining buffer for 10 samples).
3. Mix well and incubate at room temperature in dark for 20 minutes.
4. Add 1-2 mL of staining buffer and centrifuge at 400 RCF for 1 minute and discard supernatant.
5. Wash twice by re-suspending cells in staining buffer (2 mL for tubes or 200 uL for wells) and centrifuging at 400 RCF for 5 minutes. Discard supernatant.
6. Add appropriate amount of secondary antibody (as experimentally determined) to each sample.
7. Incubate at room temperature in dark for 20 minutes.
8. Add 1-2 mL of staining buffer and centrifuge at 400 RCF for 1 minute and discard supernatant.
9. Wash twice by re-suspending cells in staining buffer (2 mL for tubes or 200 uL for wells) and centrifuging at 400 RCF for 5 minutes. Discard supernatant.
10. Resuspend in an appropriate volume of staining buffer (usually 500 uL per sample) and proceed with analysis on your flow cytometer.

Immunocytochemistry/ Immunofluorescence Protocol for Integrin beta 1/CD29 Antibody (NBP2-36561)
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 NBP2-36561

NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

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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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