Product Datasheet

MHC class II (I-A/I-E) Antibody (M5/114.15.2) - BSA Free
NBP1-43312-0.1mg

Unit Size: 0.1 mg

Store at 4C. Do not freeze.

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Publications: 23

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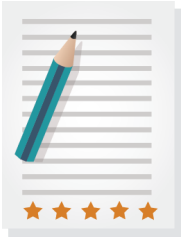
Updated 9/9/2025 v.20.1



NBP1-43312-0.1mg

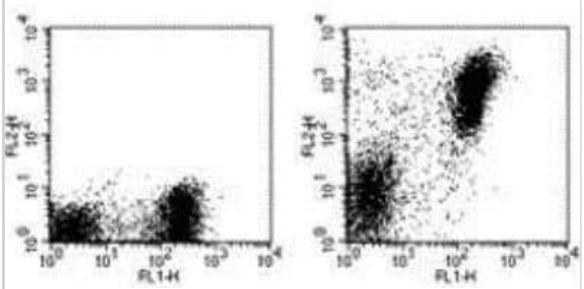
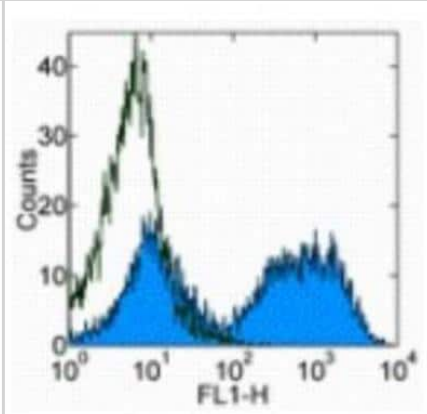
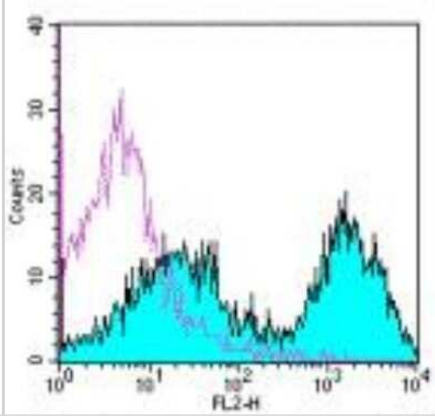
MHC class II (I-A/I-E) Antibody (M5/114.15.2) - BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	0.5 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Monoclonal
Clone	M5/114.15.2
Preservative	0.09% Sodium Azide
Isotype	IgG2b Kappa
Purity	Protein A or G purified
Buffer	PBS (pH 7.2)

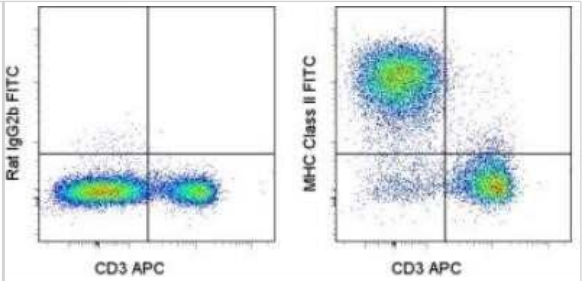
Product Description	
Description	Novus Biologicals Rat MHC class II (I-A/I-E) Antibody (M5/114.15.2) - BSA Free (NBP1-43312) is a monoclonal antibody validated for use in IHC, WB, Flow and IP. Anti-MHC class II (I-A/I-E) Antibody: Cited in 21 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rat
Gene ID	100504404
Gene Symbol	H2-Ea
Species	Human, Mouse
Reactivity Notes	Use in Human reported in scientific literature (PMID:29990503).
Specificity/Sensitivity	The monoclonal antibody reacts with the mouse major histocompatibility complex class II, both I-A and I-E subregion-encoded glycoproteins (I-A b, I-A d, I-A q, I-E d, I-E k, not I-A f, I-A k, or I-A s). It detects a polymorphic determinant present on B cells, monocytes, macrophages, dendritic cells, and activated T lymphocytes from mice carrying the H-2 b, H-2 d, H-2 q, H-2 p, H-2 r and H-2 u but not from mice carrying the H-2 s or H-2 f haplotypes. The M5/114 mAb is reported to inhibit I-A-restricted T cell responses of the H-2 b, H-2 d, H-2 q, H-2 u but not H-2 f, H-2 k, or H-2 s haplotypes.
Immunogen	The immunogen for this antibody was MHC Class II.

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation
Recommended Dilutions	Western Blot 1:100-1:2000, Flow Cytometry < 0.125 ug/10^6 cells, Immunohistochemistry 1:10-1:500, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:10-1:500, Immunohistochemistry-Frozen 1:10-1:500
Application Notes	The M5/114.15.2 antibody has been tested by flow cytometric analysis of mouse splenocyte suspensions and can be used at less than or equal to 0.125 ug per test. Cell number should be determined empirically but can range from 10^5to 10^8cells/test.

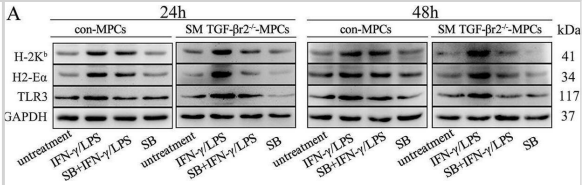
Images

Flow Cytometry: MHC Class II Antibody (M5/114.15.2) [NBP1-43312] - Analysis using the PE conjugate of NBP1-43312. Analysis of mouse splenocyte suspensions using MHC Class II PE and can be used at less than or equal to 0.125 ug per test. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test.	
Flow Cytometry: MHC Class II Antibody (M5/114.15.2) [NBP1-43312] - Staining of C57BL/6 splenocytes with 0.06 ug of Rat IgG2b K Isotype Control Purified (cat. NBP1-43323) (open histogram) or 0.06 ug of Anti-Mouse MHC Class II (I-A/I-E) Purified (filled histogram) followed by Anti-Rat IgG FITC (cat. NBP1-69751). Total viable cells were used for analysis.	
Flow Cytometry: MHC Class II Antibody (M5/114.15.2) [NBP1-43312] - Analysis using the Allophycocyanin conjugate of NBP1-43312. Staining of C57BL/6 splenocytes with Anti-Mouse CD3e FITC and 0.015 micrograms of Rat IgG2b ? Isotype Control APC (left) or 0.015 micrograms of Anti-Mouse MHC Class II (I-A/I-E) APC (right).	
Flow Cytometry: MHC Class II Antibody (M5/114.15.2) [NBP1-43312] - Analysis using the Biotin conjugate of NBP1-43312. Staining of C57BL/6 splenocytes with 0.015 ug of Rat IgG2b K Isotype Control Biotin (open histogram) or 0.015 ug of Anti-Mouse MHC Class II (I-A/I-E) Biotin followed by Streptavidin PE (filled histogram).	

Flow Cytometry: MHC Class II Antibody (M5/114.15.2) [NBP1-43312] - Analysis using the FITC conjugate of NBP1-43312. Staining of C57BL/6 splenocytes with Anti-Mouse CD3e and 0.06 micrograms of Rat IgG2b k Isotype Control FITC (left) or 0.06 micrograms of Anti-Mouse MHC Class II (I-A/I-E) FITC (right). Cells in the lymphocyte gate were used for analysis.



TGF-β-IRE1α signaling inhibits immunological characteristics of muscle cells by attenuating p38 MAPK pathway. Western blot analyses of the expression changes of H-2Kb, H2-Eα, or TLR3 in MPC-myotubes derived from Con and SM TGF-βr2−/− mice (A), or in TGF-βr2−/− MPC-myotubes (B) with or without stimulation of IFN-γ/LPS, SRI, 4μ8C, and/or SB (p38 pathway inhibitor). The relative protein expression values are expressed as a ratio (protein of interest/GAPDH). All data are presented as means +/- SD (n = 3). A one-way ANOVA was used for multiple comparisons (*P < 0.05; **P < 0.01) Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/36849929), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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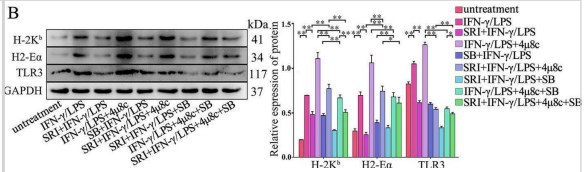
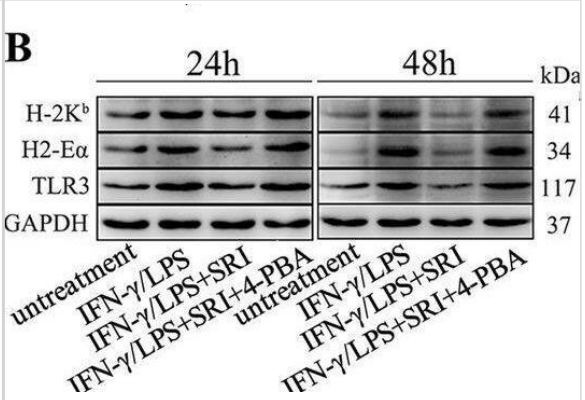
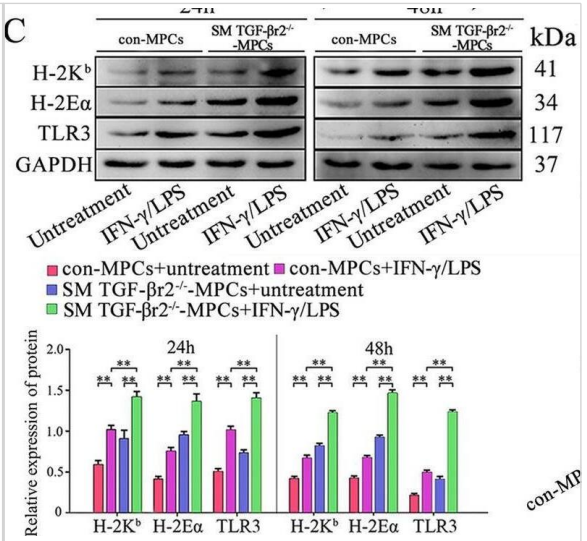


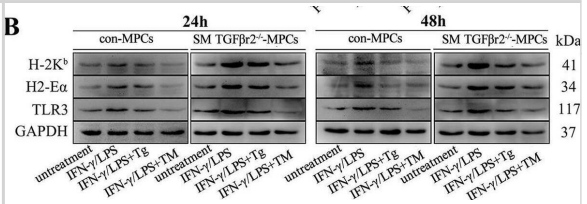
TGF-β signaling inhibits immunological characteristics of myofibers through activating the IRE1α pathway. Western blot analyses of the expression changes of Smad pathway proteins, IRE1α and PERK pathway proteins, and immunological molecules in MPC-myotubes isolated from SM TGF-βr2−/− mice, with or without 48 h stimulation of IFN-γ/LPS and/or SRI (A); 24 or 48 h stimulation of IFN-γ/LPS, SRI, 4-PBA, 4μ8C (IRE1α pathway inhibitor) or GSK (PERK pathway inhibitor) (B, D). The relative protein expression values are expressed as a ratio [protein of interest/GAPDH or phosphorylated (P) protein/total (T) protein]. C mRNA levels of IL-1β, IL-6, and MCP-1 in MPC-myotubes isolated from SM TGF-βr2−/− mice, with or without 48 h stimulation of IFN-γ/LPS, SRI and/or 4-PBA,analyzed by qPCR. All data are presented as means +/- SD (n = 3). A one-way ANOVA was used for multiple comparisons (*P < 0.05; **P < 0.01) Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/36849929), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



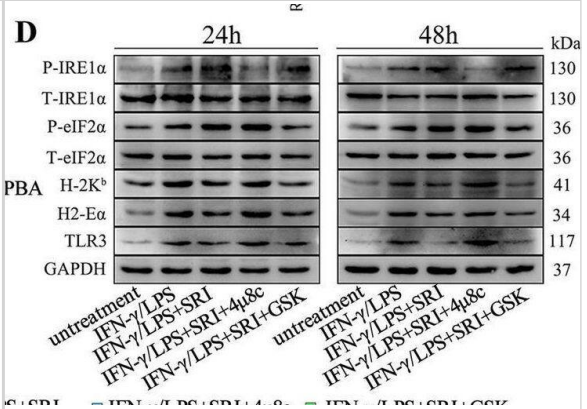
Intrinsic TGF-β signal controls immunological molecules and myokine expression in cultured primary myotubes. A Representative immunofluorescence staining for desmin, myogenin, eMHC, and TGF-βr2 in SM TGF-βr2−/− mice-derived MPC-myotubes (MPCs) that received pro-inflammatory stimuli or not. B, C Western blot analysis of the protein expression of p-Smad2/3, H-2Kb, H2-Eα, and TLR3 in MPC-myotubes that received pro-inflammatory stimuli or not. D Luminex assay of protein level changes for pro-inflammatory myokines in control or SM TGF-βr2−/− mice-derived MPC-myotubes exposed to inflammatory milieu or not. Before creating the heat map, log transformation was used to process the data and plot in R language. The relative protein levels are expressed as a ratio (protein of interest/GAPDH). All data are presented as means +/- SD (n = 3 replicates). One-way ANOVA was used for multiple comparisons (**P < 0.01; ***P < 0.001). Bar = 50 μm Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/36849929), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Intrinsic TGF-β signaling affects muscle cell immune behaviors by prompting UPR activity under pro-inflammatory conditions. The protein levels of IRE1α and eIF2α (A), H-2Kb, H2-Eα, and TLR3 (B) in control or SM TGF-βr2−/− mice-derived MPC-myotubes, with or without stimulation of IFN-γ/LPS, Tg, or TM, were analyzed by Western blot. The relative protein expression values are expressed as a ratio [protein of interest/GAPDH or phosphorylated (P) protein/total (T) protein]. C mRNA levels of IL-1β, IL-6, and MCP-1 in MPC-myotubes with or without 48 h stimulation of IFN-γ/LPS, Tg, or TM, analyzed by qPCR. All data are presented as means +/- SD (n = 3). A one-way ANOVA was used for multiple comparisons (*P < 0.05; **P < 0.01) Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/36849929), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



TGF-β signaling inhibits immunological characteristics of myofibers through activating the IRE1α pathway. Western blot analyses of the expression changes of Smad pathway proteins, IRE1α and PERK pathway proteins, and immunological molecules in MPC-myotubes isolated from SM TGF-βr2−/− mice, with or without 48 h stimulation of IFN-γ/LPS and/or SRI (A); 24 or 48 h stimulation of IFN-γ/LPS, SRI, 4-PBA, 4μ8C (IRE1α pathway inhibitor) or GSK (PERK pathway inhibitor) (B, D). The relative protein expression values are expressed as a ratio [protein of interest/GAPDH or phosphorylated (P) protein/total (T) protein]. C mRNA levels of IL-1β, IL-6, and MCP-1 in MPC-myotubes isolated from SM TGF-βr2−/− mice, with or without 48 h stimulation of IFN-γ/LPS, SRI and/or 4-PBA,analyzed by qPCR. All data are presented as means +/- SD (n = 3). A one-way ANOVA was used for multiple comparisons (*P < 0.05; **P < 0.01) Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/36849929), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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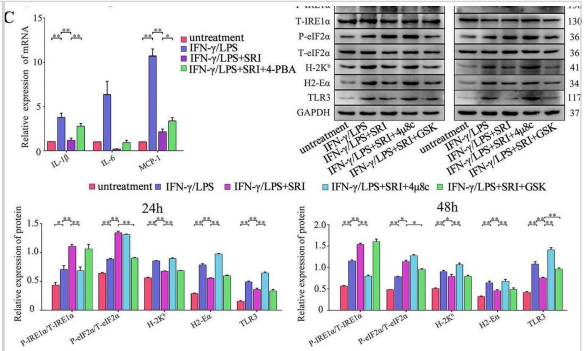

Publications

Funk MC, Gleixner JG, Heigwer F, Vonficht D et Al. Aged intestinal stem cells propagate cell-intrinsic sources of inflammaging in mice Dev Cell 2023-12-19 [PMID: 38113852]

Luckett, T;Abudula, M;Ireland, L;Glenn, M;Bellomo, G;Stafferton, R;Halloran, C;Ghaneh, P;Jones, R;Schmid, MC;Mielgo, A; Mesothelin Secretion by Pancreatic Cancer Cells Co-opts Macrophages and Promotes Metastasis Cancer research 2024-02-15 [PMID: 38356443]

Gallage S, Ali A, Barragan Avila JE, Seymen N et Al. A 5:2 intermittent fasting regimen ameliorates NASH and fibrosis and blunts HCC development via hepatic PPAR? and PCK1 Cell Metab 2024-05-08 [PMID: 38718791]

Balmert SC, Ghozloujeh ZG, Carey CD et al. A microarray patch SARS-CoV-2 vaccine induces sustained antibody responses and polyfunctional cellular immunity iScience 2022-10-21 [PMID: 36062075]

Sobel RA, Albertelli M, Hinojoza JR et al. Azetidine-2-Carboxylic Acid-Induced Oligodendrogliopathy: Relevance to the Pathogenesis of Multiple Sclerosis Journal of Neuropathology & Experimental Neurology 2022-05-20 [PMID: 35521963]

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]

Nithianandam V, Bukhari H, Leventhal M et al. Integrative analysis reveals a conserved role for the amyloid precursor protein in proteostasis during aging bioRxiv 2023-10-09 [PMID: 37923712]

Gallage S, Ali A, Barragan Avila J et al. Beneficial effects of intermittent fasting in NASH and subsequent HCC development are executed by concerted PPAR? and PCK1 action in hepatocytes bioRxiv 2023-10-25 (IHC-P, Mouse)

Details:
Dilution 1:250

Tanaka T, Okuda H, Isonishi A et al. Dermal macrophages set pain sensitivity by modulating the amount of tissue NGF through an SNX25-Nrf2 pathway Nature immunology 2023-01-26 [PMID: 36703006] (IHC-Fr, Mouse)

Details:
Dilution used 1:500

Xiao J, Huang J, Jian X et al. IRE1? arm of unfolded protein response in muscle-specific TGF-? signaling-mediated regulation of muscle cell immunological properties Cellular & molecular biology letters 2023-02-27 [PMID: 36849929] (WB, Mouse)

Pires, A, Greenshields-Watson, A Et al. Immune Remodeling of the Extracellular Matrix Drives Loss of Cancer Stem Cells and Tumor Rejection. Cancer Immunol Res 2020-12-01 [PMID: 33023965] (IHC-Fr, Mouse)

Deczkowska A, David E, Ramadori P et al. XCR1+ type 1 conventional dendritic cells drive liver pathology in non-alcoholic steatohepatitis Nature medicine 2021-05-20 [PMID: 34017133]

More publications at http://www.novusbio.com/NBP1-43312

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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF005	Goat anti-Rat IgG Secondary Antibody [HRP]
NB7115	Goat anti-Rat IgG (H+L) Secondary Antibody [HRP]
NBP1-43323-0.5mg	Rat IgG2b Kappa Light Chain Isotype Control (149/10H5)

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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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