

Product Datasheet

ICAM-1/CD54 Antibody (1A29) - Azide and BSA Free NBP2-22541-0.1mg

Unit Size: 0.1 mg

Store at -20C. Avoid freeze-thaw cycles.

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NBP2-22541-0.1mg

ICAM-1/CD54 Antibody (1A29) - Azide and BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	1A29
Preservative	No Preservative
Isotype	IgG1
Purity	Immunogen affinity purified
Buffer	PBS (pH 7.2)
Target Molecular Weight	56 kDa
Product Description	
Host	Mouse
Gene ID	3383
Gene Symbol	ICAM1
Species	Human, Mouse, Rat
Reactivity Notes	Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Additional Mouse on Mouse blocking steps may be required for IHC and ICC experiments. Please contact Technical Support for more information.
Immunogen	Rat lymph node stroma
Product Application Details	
Applications	Western Blot, Simple Western, Electron Microscopy, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Proximity Ligation Assay, Block/Neutralize, Immunohistochemistry Free-Floating
Recommended Dilutions	Western Blot 1 - 3 ug/ml, Simple Western, Flow Cytometry 1:10 - 1:1000, Immunohistochemistry 1:100, Immunocytochemistry/ Immunofluorescence 1 - 2 ug/ml, Immunohistochemistry-Paraffin 1:100, Immunohistochemistry-Frozen 1:100, Proximity Ligation Assay, Electron Microscopy, Immunohistochemistry Free-Floating, Block/Neutralize
Application Notes	Use in PLA reported in scientific literature (PMID:34572594). Use in Immunohistochemistry free floating, and Electron Microscopy reported in scientific literature (PMID: 8574890). .

Images

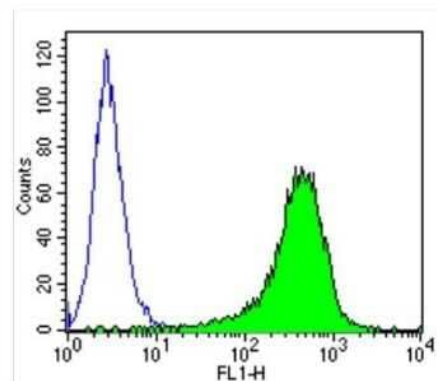
Western Blot: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Western blot analysis of MDA-MB-231 cells transfected with/without an IL-8 silencer RNA (siIL-8) to evaluate the expression of MUC-1, VCAM-1 (NBP1-28404), and ICAM-1 (NBP2-22541). GAPDH load control was reused for illustrative purposes. Image collected and cropped by CiteAb from the following publication ([frontiersin.org/article/10.3389/fimmu.2018.01767/full](https://www.frontiersin.org/article/10.3389/fimmu.2018.01767/full)), licensed under a CC-BY license.



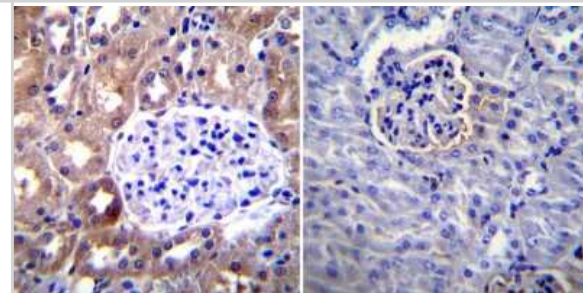
Immunohistochemistry-Frozen: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Staining of frozen rat spleen with Mouse anti Rat CD54.



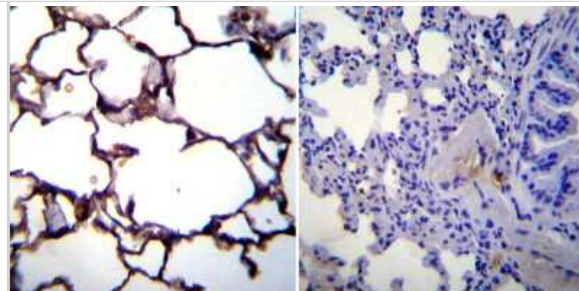
Flow Cytometry: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Analysis of CD54 in C6 cells (green) compared to an isotype control (blue).



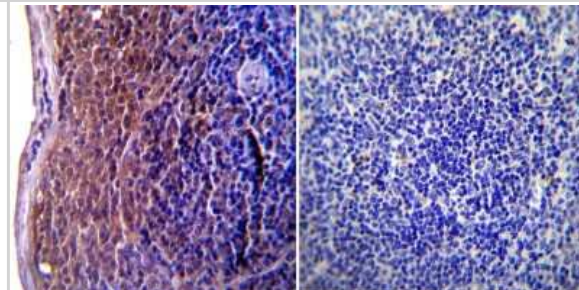
Immunohistochemistry-Paraffin: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Normal biopsies of deparaffinized Mouse kidney tissue.



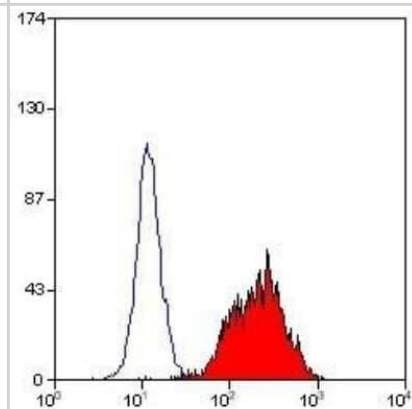
Immunohistochemistry: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Normal biopsies of deparaffinized Mouse lung tissue.



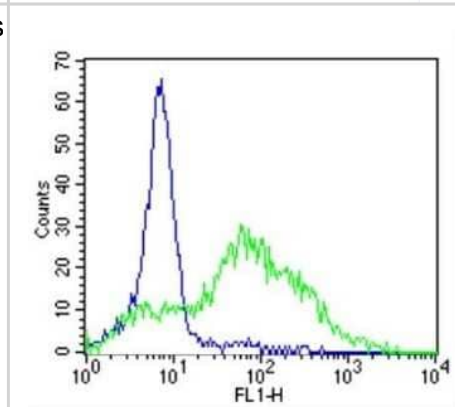
Immunohistochemistry-Paraffin: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Normal biopsies of deparaffinized Mouse spleen tissue.



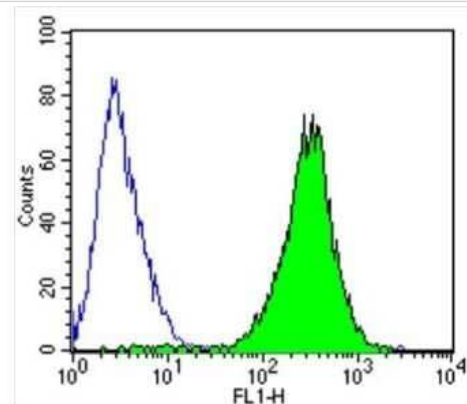
Flow Cytometry: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Staining of stimulated rat spleen cells with mouse anti-rat CD54 (Alexa488).



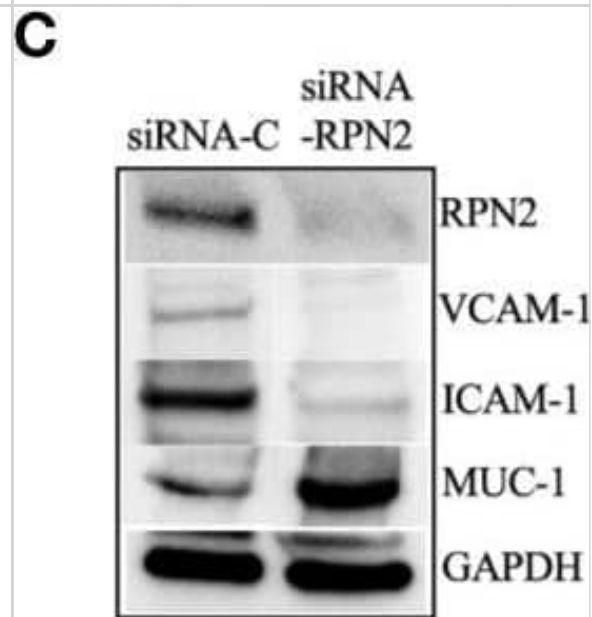
Flow Cytometry: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Analysis of CD54 in Ramos cells (green) compared to an isotype control (blue).



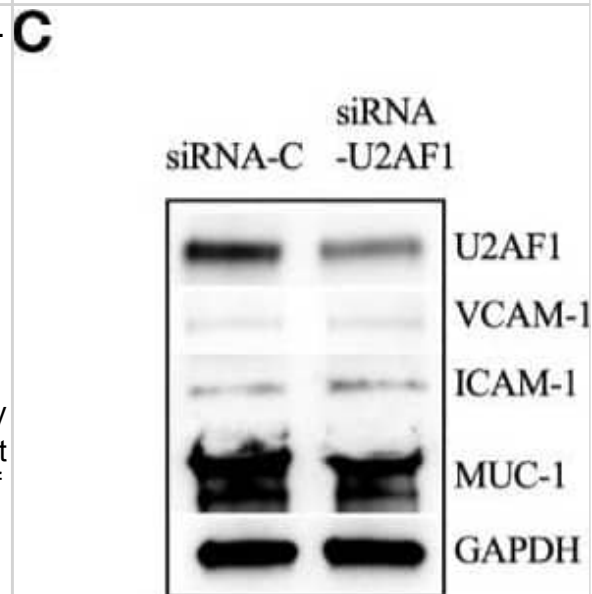
Flow Cytometry: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Analysis of CD54 in Raji cells (green) compared to an isotype control (blue).



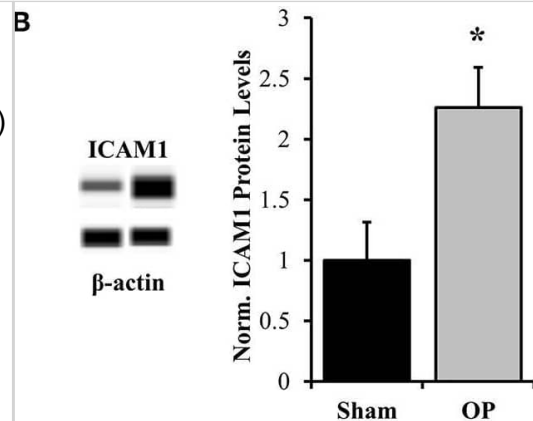
Knockdown of RPN2 decreased luminal B BC cell dissemination in vivo. Luminal B ER+ T47D cells, transfected with negative control siRNA (siRNA-C) or siRNA targeting RPN2 (siRNA-RPN2) were injected + estradiol (E2) ± neutrophils (Neu) into zebrafish transgenic embryos with green fluorescent blood vessels & analyzed as described in materials & methods. (A) Migration in vitro (n = 6). (B) In vivo dissemination of transfected T47D in presence of E2 ± Neu (n = 23–26). Scale bar = 100 μ m. (n = 23–26). (C) Western blot analysis for confirmation of siRNA-RPN2 transfection & VCAM-1, ICAM-1, & MUC-1 expression. (D) Focal adhesions area (n = 5–6). Scale bar = 10 μ m. (E) Proliferation (n = 6). Representative images of zebrafish embryos with disseminated luminal B T47D BC cells & immunocytochemistry analysis of vinculin expression are shown. Arrows show disseminated T47D & arrowheads show focal adhesions. BV = blood vessels. Data are presented as mean \pm SEM. Two-tailed Student's t-test *P < 0.05, ***P < 0.001, ns, not significant. Data are represented of at least two independent experiments. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/33330095>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



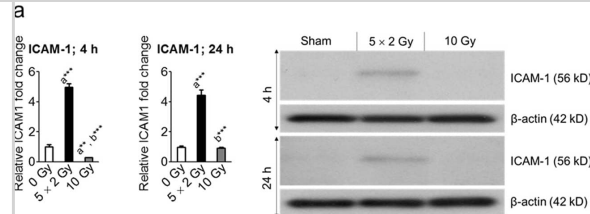
Knockdown of U2AF1 decreased luminal A BC cell dissemination in vivo. Luminal A ER+ MCF-7 cells, transfected with negative control siRNA (siRNA-C) or siRNA targeting U2AF1 (siRNA-U2AF1) were injected in presence of estradiol (E2) ± neutrophils (Neu) into zebrafish transgenic embryos, with green fluorescent blood vessels, & analyzed as described in materials & methods. (A) Migration in vitro (n = 6–12). (B) In vivo dissemination in presence of E2 ± Neu (n = 38–41). Scale bar = 100 μ m. (C) Western blot analysis for confirmation of siRNA-U2AF1 transfection & ICAM-1, VCAM-1, & MUC-1 expression. (D) Focal adhesion area (n = 7). Scale bar = 10 μ m. (E) Proliferation in vitro (n = 12). Representative images of zebrafish embryos with disseminated MCF-7 cells & immunocytochemistry analysis of vinculin expression are shown. Arrows show disseminated MCF-7 cells & arrowheads show focal adhesions. BV = blood vessels. Data are presented as mean \pm SEM. Two-tailed Student's t-test *P < 0.05, **P < 0.01, ns, not significant. Data are represented of at least two independent experiments. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/33330095>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



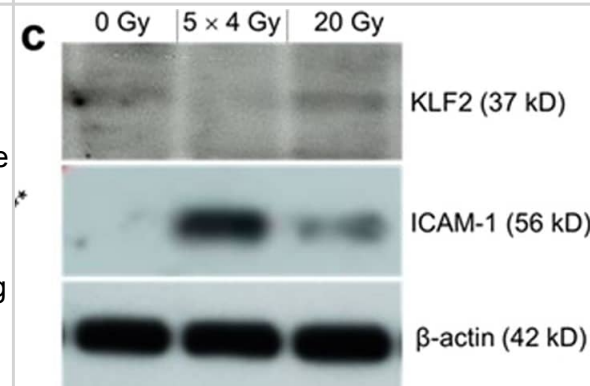
Western Blot: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Normalized gene & protein expression of ICAM-1. (A) qPCR results indicated no change in mRNA expression of ICAM-1 at 24 h post-overpressure but a significant increase at 48 h as compared to sham. (B) Subsequent Western blot results confirmed elevated ICAM-1 protein levels at 48 h compared to sham. * $p < 0.05$. Data are represented as mean \pm SEM, gene: $n = 7-9$ /group, protein: $n = 8-9$ /group. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30853931>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Fractionated, compared to single exposure, radiation more profoundly enhanced ICAM-1 expression. Representative (3 independent experiments) Western blot analysis & quantification of ICAM-1 levels in whole-cell lysates from nonirradiated (sham) & irradiated HUVECs 4 h & 24 h after exposure to (a) either five fractions of 2 Gy (5 \times 2 Gy) or single exposure to 10 Gy & (b) either five fractions of 2.5 Gy (5 \times 2.5 Gy) or single exposure to 12.5 Gy. Fractions delivered at 24-h intervals. β -actin served as a loading control. c Ectopic expression of ICAM-1 after exposure to 0 Gy, five fractions of 2 Gy, or 10 Gy, as measured by flow cytometry ($n = 3$). d NF- κ B activation after 4 h of exposure to 0 Gy, five fractions of 2 Gy, or 10 Gy ($n = 2$). Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/32382091>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: ICAM-1/CD54 Antibody (1A29) [NBP2-22541] - Fractionated thoracic irradiation suppressed KLF2 & enhanced ICAM-1 levels in the lung. Quantification of KLF2 (a) & ICAM-1 (b) protein levels & representative Western blot analysis (c) in the lung tissue of mice ($n = 6$) at 24 h following 5 fractions of 4 Gy at 24 h intervals or single exposure to 20 Gy. β -actin served as a loading control. KLF2 immunostaining in the lung tissue samples of sham irradiated (d), irradiated (e), & quantitation (f) at 24 h after exposure to 5 fractions of 4 Gy at 24 h intervals or single exposure to 20 Gy. ICAM-1 immunostaining in the lung tissue samples of sham irradiated (g), or irradiated (h), & quantitation (i) at 24 h after exposure to 5 fractions of 4 Gy at 24 h intervals or single exposure to 20 Gy. (n , number of independent experiments performed; a, significant statistical difference between nonirradiated & irradiated groups; b, significant statistical difference between fractionated irradiation & single exposure; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$). Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/32382091>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Vacnov G, Vejračková D, Lukáčová P et al. Associations of polymorphisms in the candidate genes for Alzheimer's disease BIN1, CLU, CR1 and PICALM with gestational diabetes and impaired glucose tolerance. *Molecular biology reports* 2017-10-10 [PMID: 28316001]

Sulimai N, Brown J, Lominadze D. Fibrinogen Interaction with Astrocyte ICAM-1 and PrP(C) Results in the Generation of ROS and Neuronal Death *International Journal of Molecular Sciences* 2021-02-27 [PMID: 33673626] (Block/Neutralize)

Xu Z, Wang X, Kuang W et al. Kaempferol improves acute kidney injury via inhibition of macrophage infiltration in septic mice *Bioscience Reports* 2023-07-26 [PMID: 37440431] (Western Blot, Block/Neutralize)

Vazquez Rodriguez G, Abrahamsson A, Turkina MV, Dabrosin C. Lysine in Combination With Estradiol Promote Dissemination of Estrogen Receptor Positive Breast Cancer via Upregulation of U2AF1 and RPN2 Proteins *Frontiers in Oncology* 2020-11-30 [PMID: 33330095] (Western Blot)

Liu Q, Li C, Deng B et al. Tcf21 marks visceral adipose mesenchymal progenitors and functions as a rate-limiting factor during visceral adipose tissue development *Cell reports* 2023-02-28 [PMID: 36857185] (FLOW, IHC-P, Mouse)

Sulimai N, Brown J, Lominadze D The Effects of Fibrinogen's Interactions with Its Neuronal Receptors, Intercellular Adhesion Molecule-1 and Cellular Prion Protein *Biomolecules* 2021-09-18 [PMID: 34572594] (PLA, Mouse)

Sadhukhan R, Leung J. W. C, et al. Fractionated radiation suppresses Kruppel-like factor 2 pathway to a greater extent than by single exposure to the same total dose. *Sci Rep* 2020-05-07 [PMID: 32382091] (IF/IHC, Mouse)

Differentiation-related Expression of ICAM-1 by Rat Alveolar Epithelial Cells. Christensen PJ, Kim S, Simon RH et al. *Am J Respir Cell Mol Biol* [PMID: 8093343]

Pistorius K, Souza PR, De Matteis R et al. PDn-3 DPA Pathway Regulates Human Monocyte Differentiation and Macrophage Function *Cell Chem Biol* May 16 2018 12:00AM [PMID: 29805036] (Flow) *Cell Chem Biol.* 2018-05-24 [PMID: 29805036] (FLOW)

Details:

Citation using the Alexa Fluor 647 form of this antibody.

Hlavac N, VandeVord PJ. Astrocyte Mechano-Activation by High-Rate Overpressure Involves Alterations in Structural and Junctional Proteins *Front Neurol* 2019-02-22 [PMID: 30853931] (Simple Western, Rat)

Vazquez Rodriguez G, Abrahamsson A, Jensen LDE et al. Adipocytes Promote Early Steps of Breast Cancer Cell Dissemination via Interleukin-8 *Front. Immunol* 2018-07-30 [PMID: 30105032] (WB, Human)

Details:

This citation used the Azide and BSA Free version of this antibody.

Hu S, Liu Y, You T et al. Vascular Semaphorin 7A Upregulation by Disturbed Flow Promotes Atherosclerosis Through Endothelial B1 Integrin. *Arterioscler. Thromb. Vasc. Biol.* 2017-12-21 [PMID: 29269512] (Mouse)

More publications at <http://www.novusbio.com/NBP2-22541>



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General: novus@novusbio.com

Products Related to NBP2-22541-0.1mg

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)
NBP2-22541AF488	ICAM-1/CD54 Antibody (1A29) [Alexa Fluor® 488]

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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