Product Datasheet

CCR7 Antibody
NB100-712SS

Unit Size: 0.02 mg

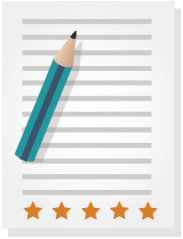
Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

www.novusbio.com technical@novusbio.com

Publications: 43

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB100-712

Updated 9/9/2025 v.20.1



NB100-712SS

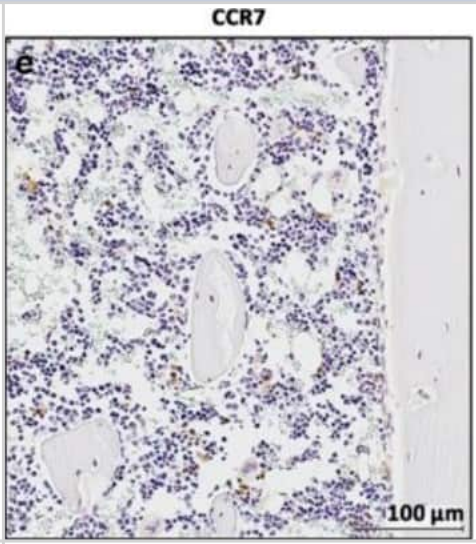
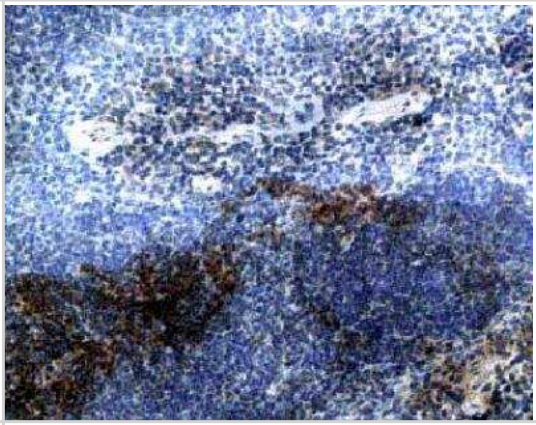
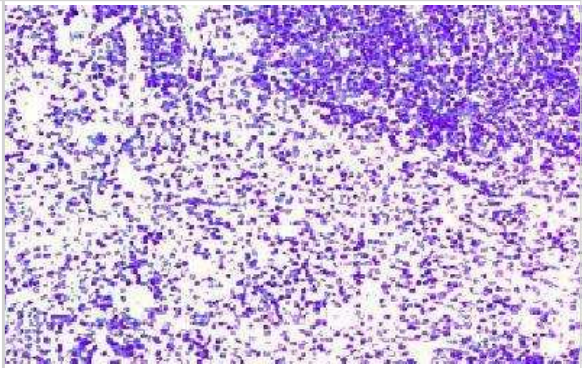
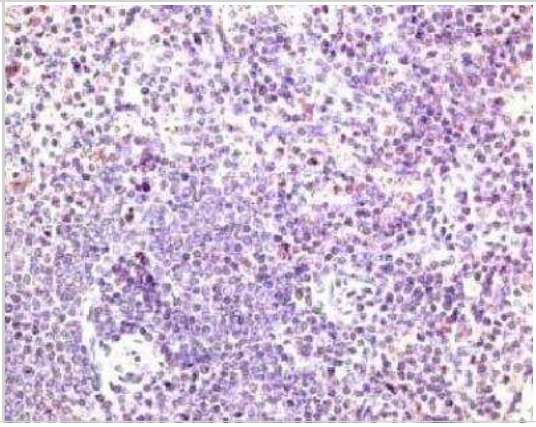
CCR7 Antibody

Product Information	
Unit Size	0.02 mg
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.1% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	10 mM KHPO4, 0.14 M NaCl, 1.0 mg/mL BSA
Target Molecular Weight	43 kDa

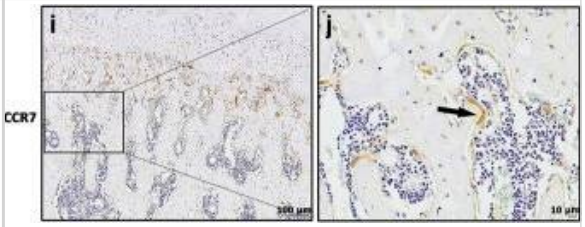
Product Description	
Description	Novus Biologicals Goat CCR7 Antibody (NB100-712) is a polyclonal antibody validated for use in IHC, WB, ELISA, Flow and ICC/IF. Anti-CCR7 Antibody: Cited in 43 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Goat
Gene ID	1236
Gene Symbol	CCR7
Species	Human, Mouse, Rat
Reactivity Notes	Rat reactivity reported in scientific literature (PMID: 25831137), (25803728).
Specificity/Sensitivity	Peptide sequence is < 50 % identical to other mouse chemokine receptors in this region.
Immunogen	Synthetic peptide: DPGKPRKNVLVVALLVIFQVC, corresponding to amino acids 2-22 of Mouse CCR7.

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, ELISA, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, In vivo assay
Recommended Dilutions	Western Blot 1:1000, Flow Cytometry 1:10, ELISA 1:100000, Immunohistochemistry 1:250, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunohistochemistry-Paraffin 1:250, Immunohistochemistry-Frozen 1:250, In vivo assay
Application Notes	Use in ICC/IF reported in scintific literature (PMID: 29311580). Use in IHC-Frozen reported in scientific literature (PMID: 25803728). Use in In Vivo assays reported in scientific literature (PMID: 30541701).

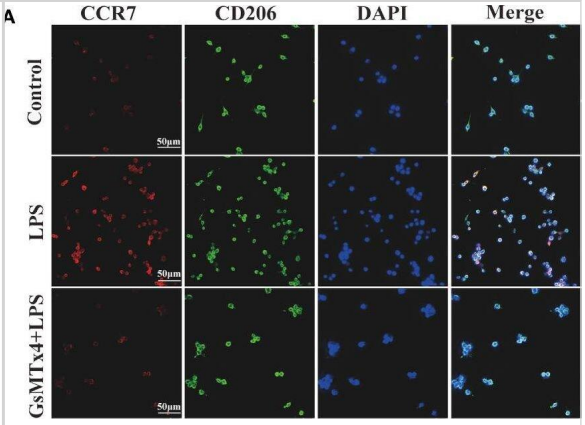
Images

Immunohistochemistry-Paraffin: CCR7 Antibody [NB100-712] - M1 and M2 macrophages showed similar expression patterns in cortical bone. IHC staining was performed in sagittal serial sections of medial condyles from 6-week-old rats within the diaphyseal region. Cluster of differentiation 68 (CD68) was selected as a pan marker for the macrophage lineage, including monocytes, macrophages, giant cells, and osteoclasts. iNOS and C-C chemokine receptor type 7 (CCR7) were selected as M1 phenotypic markers, whereas Arginase1 and cluster of differentiation 163 (CD163) were selected as M2 phenotypic markers. Tartrate-resistant acid phosphatase (TRAP) staining was performed as described in Materials and Methods. Quantification of cell numbers according to their location revealed that most of the M1 and M2 cells were not attached to the bone surfaces. Image collected and cropped by CiteAb from the following publication (//www.nature.com/articles/boneres201719) licensed under a CC-BY license.	
Immunohistochemistry-Paraffin: CCR7 Antibody [NB100-712] - Mouse spleen	
Immunohistochemistry-Paraffin: CCR7 Antibody [NB100-712] - Mouse spleen	
Immunohistochemistry-Paraffin: CCR7 Antibody [NB100-712] - Human spleen	

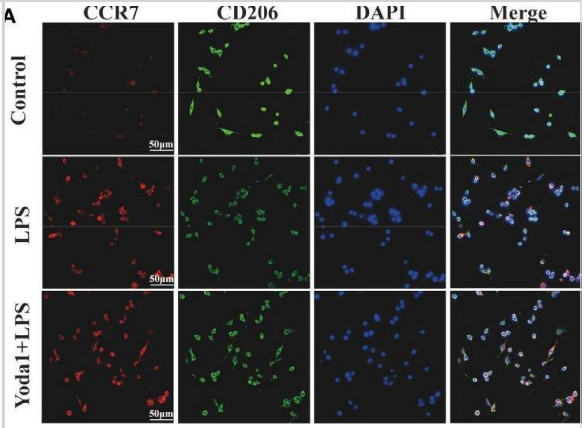
Immunohistochemistry: CCR7 Antibody [NB100-712] - M1 expression pattern changed in trabecular bone. Immunohistochemical staining was performed in sagittal serial sections of medial condyles from 6-week-old rats within the epiphyseal region. The region with the solid line indicates areas of interest to be enlarged in the following image. Representative staining with the anticluster of differentiation 68 (CD68) antibody demonstrated that CD68+ cells were either attached (black arrows) or unattached (white arrows) to the bone surfaces with a variety of sizes & shapes (a, b). TRAP+ cells showed multinucleated morphology (black arrows) which is similar to the CD68+ cells (c, d). Inducible nitric oxide synthase-positive (iNOS+) & C-C chemokine receptor type 7-positive (CCR7+) cells (black arrow) were attached to the bone surfaces with an elongated morphology (e, f, i, j). Arginase1+ & cluster of differentiation 163-positive (CD163+) cells (white arrow) represented the predominant population in the reticular connective tissue with similar expression patterns as in the cortical bone (g, h, k, l). No positive staining was found in isotype controls (data not shown). Most of the M1-labeled cells were found attached to bone surfaces instead of M2-labeled cells (m). Representative images from three independent experiments are shown. FOV, field of view. Data shown as the mean±s.d. (*P<0.05). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29263936), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immune response of macrophages after blocking Piezo1. (A) IF staining of CCR7 and CD206 in the Control, LPS and GsMTx4+LPS groups after 4-day-cultured. M1 macrophages were marked with CCR7 (red), M2 macrophages with CD206 (green), and nuclei with DAPI (blue). (B) Semi-quantitative analysis of CCR7 and CD163 in each group. (C) Flow cytometry analysis of RAW264. 7 cells in the Control, LPS and GsMTx4+LPS groups. Q6 represents M1 types (F4/80+/iNOS+) and Q10 represents M2 types (F4/80+/CD206+). (D) Expressions of Piezo1 and inflammation-related genes (Tnfa and Il1b) in macrophages cultured for 4 days. (E) Western blotting analysis of PIEZO1, IL-1B and TNF-A in RAW264. 7 cultured for 4 days. (F) Intracellular ROS levels of RAW264. 7 cultured for 4 days. (G) Concentration of inflammatory cytokines in macrophage medium detected by ELISA. *P < 0. 05; **P < 0. 01; ***P < 0. 001. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37261355), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immune response of macrophages after activating Piezo1. (A) IF staining of CCR7 and CD206 in the Control, LPS and Yoda1+LPS groups after 4-day-cultured. M1 macrophages were marked with CCR7 (red), M2 macrophages with CD206 (green), and nuclei with DAPI (blue). (B) Semi-quantitative analysis of CCR7 and CD206. (C) Flow cytometry analysis of RAW264. 7 cells in the Control, LPS and Yoda1+LPS groups. Q6 represents M1 types (F4/80+/iNOS+) and Q10 represents M2 types (F4/80+/CD206+). (D)Piezo1, Tnfa and Il1b genes expressions in macrophages cultured for 4 days. (E) Western blotting analysis of PIEZO1, TNF-A and IL-1B in RAW264. 7 cultured for 4 days. (F) Intracellular ROS levels of RAW264. 7 cultured for 4 days. (G) Concentration of inflammatory cytokines in macrophages medium detected by ELISA. *P < 0. 05; **P < 0. 01; ***P < 0. 001. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37261355), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Zhao T, Chu Z, Chu C et al. Macrophages induce gingival destruction via Piezo1-mediated MMPs-degrading collagens in periodontitis Frontiers in Immunology 2023-05-16 [PMID: 37261355] (ICC/IF, Mouse, Human)

Details:
Dilution: 1:100

Lian Q, Zheng S, Shi Z et al. Using a degradable three-layer sandwich-type coating to prevent titanium implant infection with the combined efficient bactericidal ability and fast immune remodeling property Acta biomaterialia 2022-10-25 [PMID: 36306986] (IHC-P, Rat)

Hu XH, Li ZH, Muyayalo KP Et al. A newly intervention strategy in preeclampsia: Targeting PD-1/Tim-3 signaling pathways to modulate the polarization of decidual macrophages FASEB journal : official publication of the Federation of American Societies for Experimental Biology 2022-01-01 [PMID: 34847253]

Guo X, Li M, Qi W Et Al. Serial cellular events in bone formation initiated by calcium phosphate ceramics Acta biomaterialia 2021-07-22 [PMID: 34303865] (IF/IHC)

Ma Y, Wei C, Qi X et al. Schistosoma japonicum-derived peptide SJMHE1 promotes peripheral nerve repair through a macrophage-dependent mechanism American journal of translational research 2021-03-15 [PMID: 33841657] (IF/IHC, Rat)

Kim MK, Kim Y, Park S et al. Effects of Steady Low-Intensity Exercise on High-Fat Diet Stimulated Breast Cancer Progression Via the Alteration of Macrophage Polarization Integr Cancer Ther 2020-09-10 [PMID: 32909498] (IHC-P, Mouse)

Li M, Guo X, Qi W et al. Macrophage polarization plays roles in bone formation instructed by calcium phosphate ceramics J. Mater. Chem. B 2020-01-22 [PMID: 32067012]

Wang RH, Zhou Y, Xiao Y. RANKL-induced M1 macrophages are involved in bone formation. Bone Res. [PMID: 29263936] (IHC-P, Rat)

Jia Y, Yang W, Zhang K et al. Nanofiber arrangement regulates peripheral nerve regeneration through differential modulation of macrophage phenotypes Acta Biomaterialia 2018-10-01 [PMID: 30541701] (In Vivo, Rat)

Yuan XL, Zhao YP, Huang J et al. A Kv1.3 channel-specific blocker alleviates neurological impairment through inhibiting T-cell activation in experimental autoimmune encephalomyelitis CNS Neurosci Ther 2018-03-25 [PMID: 29577640] (FLOW, Rat)

Wei F, Liu G, Guo Y et al. Blood prefabricated hydroxyapatite/tricalcium phosphate induces ectopic vascularized bone formation via modulating the osteoimmune environment Biomater Sci 2018-06-22 [PMID: 29931022] (IF/IHC)

Boulding T, McCuaig RD, Tan A et al. LSD1 activation promotes inducible EMT programs and modulates the tumour microenvironment in breast cancer. Sci Rep 2018-01-08 [PMID: 29311580] (ICC/IF, Human)

More publications at http://www.novusbio.com/NB100-712

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@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Products Related to NB100-712SS

NB820-59670	Mouse Spleen Whole Tissue Lysate (Adult Whole Normal)
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF017	Rabbit anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
HAF109	Donkey anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
NB410-28088-1mg	Goat IgG Isotype Control

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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NB100-712

Earn gift cards/discounts by submitting a publication using this product: www.novusbio.com/publications