# Product Datasheet

## CCR7 Antibody
## NB100-712SS

Unit Size: 0.02 mg

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

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**Publications: 43**

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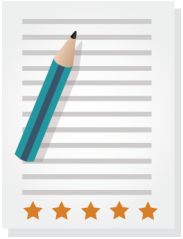
Updated 3/18/2025 v.20.1





# NB100-712SS

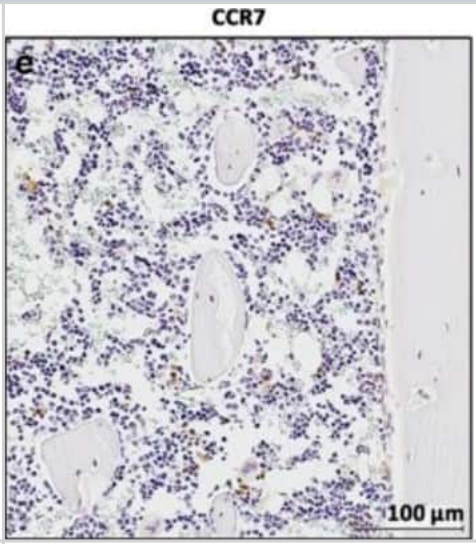
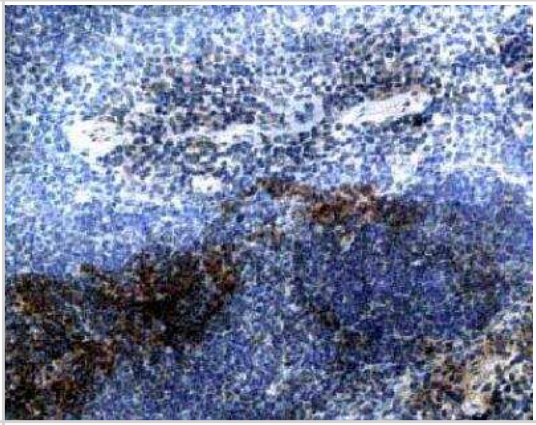
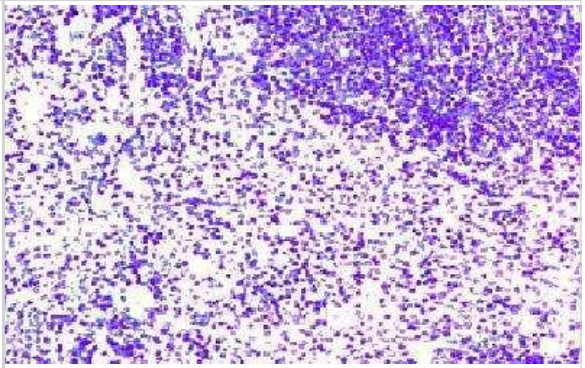
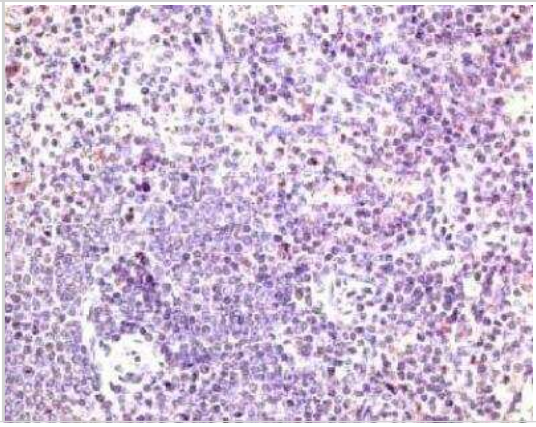
CCR7 Antibody

| 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 |

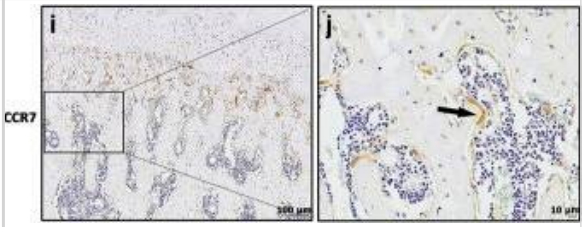
| Product Description | |
|---|---|
| **Host** | Goat |
| **Gene ID** | 1236 |
| **Gene Symbol** | CCR7 |
| **Species** | Human, Mouse, Rat |
| **Reactivity Notes** | Rat reactivity reported in scientific literature (PMID: 25831137), (25803728). |
| **Specificity/Sensitivity** | Peptide sequence is < 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, ELISA, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, 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.



## 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

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## Products Related to NB100-712SS

| | |
|---|---|
| NB820-59670 | Mouse Spleen Whole Tissue Lysate (Adult Whole Normal) |
| 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.

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