Product Datasheet

CXCR7/RDC-1 Antibody - BSA Free
NBP2-24779

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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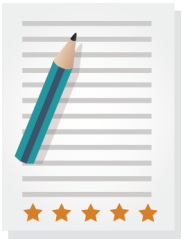
Updated 4/15/2024 v.20.1



NBP2-24779

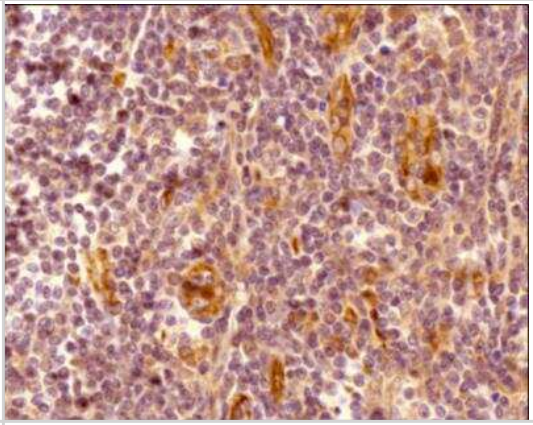
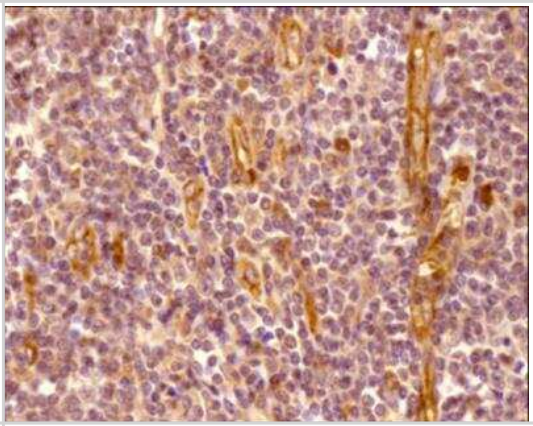
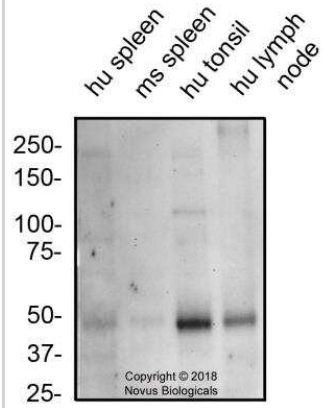
CXCR7/RDC-1 Antibody - BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Peptide affinity purified
Buffer	PBS

Product Description	
Host	Rabbit
Gene Symbol	ACKR3
Species	Human, Mouse, Rat, Sheep
Immunogen	A synthetic peptide corresponding amino acids 106-129 of human CXCR7/RDC1 was used as the immunogen, GenBank NP_064707.1.

Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Flow Cytometry (Negative)
Recommended Dilutions	Western Blot 4 - 6 ug/mL, Simple Western 1:100, Immunohistochemistry 5 - 10 ug/ml, Immunocytochemistry/ Immunofluorescence 1 - 2 ug/ml, Immunohistochemistry-Paraffin 5 - 10 ug/mL, Flow Cytometry (Negative)
Application Notes	In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by size.

Images

Simple Western: CXCR7/RDC-1 Antibody [NBP2-24779] - Lane view shows a specific band for CXCR7 in 0.5 mg/mL of Jurkat lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Immunohistochemistry-Paraffin: CXCR7/RDC-1 Antibody [NBP2-24779] - Analysis of a FFPE tissue section of human tonsil using 5 ug/mL concentration of CXCR7/RDC-1 antibody. The staining was developed using HRP labeled anti-rabbit secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin. This CXCR7 antibody generated a specific membrane cytoplasmic staining in most of the cells, and the signal was highest/very intense in the endothelial cells/blood vessels.	
Immunohistochemistry-Paraffin: CXCR7/RDC-1 Antibody [NBP2-24779] - Analysis of a FFPE tissue section of human tonsil using 5 ug/mL concentration of CXCR7/RDC-1 antibody. The staining was developed using HRP labeled anti-rabbit secondary antibody and DAB reagent, and nuclei of cells were counter-stained with hematoxylin. This CXCR7 antibody generated a specific membrane cytoplasmic staining in most of the cells, and the signal was highest/very intense in the endothelial cells/blood vessels.	
Western Blot: CXCR7/RDC-1 Antibody [NBP2-24779] - Total protein from human spleen, tonsil, lymph node and mouse spleen was separated on a 7.5% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/mL anti-CXCR7 in 1% BSA in TBST and detected with an anti-rabbit HRP secondary antibody using chemiluminescence.	

Publications

Lyu C, Ye Y, Lensing MM et al. Targeting Gi/o protein-coupled receptor signaling blocks HER2-induced breast cancer development and enhances HER2-targeted therapy JCI Insight 2021-09-22 [PMID: 34343132] (IHC)

Wang Q, Xu S, Wang B et al. Chemokine receptor 7 mediates miRNA-182 to regulate cerebral ischemia/reperfusion injury in rats CNS neuroscience & therapeutics 2022-12-15 [PMID: 36523152] (IHC, WB, Rat)

Details:
Dilution used in WB 1:100, IHC 1:200

Quinn K, Prosser S, Kane K et al. Inhibition of chemokine (C-X-C motif) receptor four (CXCR4) at the fetal-maternal interface during early gestation in sheep: alterations in expression of chemokines, angiogenic factors and their receptors. J Anim Sci 2017-03-28 [PMID: 28380526] (WB, Sheep)

Zhang Z, Zhong W, Hall MJ et al. CXCR4 but not CXCR7 is mainly implicated in ocular leukocyte trafficking during ovalbumin-induced acute uveitis. Exp Eye Res. 2009-10-01 [PMID: 19524567] (Mouse)

Details:
FA (neutralization): In vivo FA assay: D011.10 mice [(intraperitoneal injection of 15 ug or intravitreal injection of 1.5 ug of CXCR7 pAb (IMG-6099A)], Fig 8. The mitigation of OVA-induced uveitis was assessed. The antibody did not significantly alter OVA

Hattermann K, Held-Feindt J, Lucius R et al. The chemokine receptor CXCR7 is highly expressed in human glioma cells and mediates antiapoptotic effects. Cancer Res. 2010-04-15 [PMID: 20388803] (WB, Human)

Details:
WB (Fig 2): human glioma cell lines UC118, A739, A761, A764, A767, and A777. CXCR7 was detected at 50 kDa.

Odemis V, Boosmann K, Heinen A et al. CXCR7 is an active component of SDF-1 signalling in astrocytes and Schwann cells. J Cell Sci. 2010-04-01 [PMID: 20197403] (WB, Rat)

Details:
WB: Fig 1C (primary rat astrocytes transfected with CXCR7 siRNA or left untreated. Fig 1D (primary rat Schwann cells); Fig 1G (primary mouse glial and rat Schwann cells). Flow (cell surface): Figs 1E & F (primary rat astrocytes), Figs 2A & B (primary rat

Choy JC, Yi T, Rao DA et al. CXCL12 induction of inducible nitric oxide synthase in human CD8 T cells. J Heart Lung Transplant. 2008-12-01 [PMID: 19059114] (Flow-CS, Human)

Details:
Flow (cell surface): freshly isolated human CD4 and CD8 cells (Fig 1) and HeLa cells (data described, but not shown). CXCR7 was detected in HeLa but not in CD4 or CD8 cells.

Procedures

Immunocytochemistry/ Immunofluorescence Protocol for CXCR7/RDC-1 Antibody (NBP2-24779)
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.

Western Blot Protocol for CXCR7/RDC-1 Antibody (NBP2-24779)
Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 10-25 ug of total protein per lane.
2. Transfer proteins to PVDF membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain the membrane with Ponceau S (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot TBS -0.05% Tween 20 (TBST).
5. Block the membrane in 5% Non-fat milk in TBST (blocking buffer) for at least 1 hour.
6. Wash the membrane in TBST three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate overnight at 4C with gentle rocking.
8. Wash the membrane in TBST three times for 10 minutes each.
9. Incubate the membrane in diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) for 1 hour at room temperature.
10. Wash the blot in TBST three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturer's instructions.

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Products Related to NBP2-24779

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP2-24779PEP	CXCR7/RDC-1 Antibody Blocking Peptide

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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