

Datasheet for 200-401-G91**CXCR4 Antibody****Overview**

Description:	Anti-CXCR4 (RABBIT) Antibody - 200-401-G91
Item No.:	200-401-G91
Size:	100 µg
Applications:	ELISA, FC, IF, IHC, IP, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	CXCR4 antibody detects a G coupled -protein receptor. Human immunodeficiency virus (HIV) and related viruses require coreceptors, in addition to CD4, to infect target cells. Some G protein-coupled receptors including CCR5, CXCR4, CCR3, CCR2b and CCR8 in the chemokine receptor family, and four new human molecules GPR15, STRL33, GPR1 and V28 were recently identified as HIV coreceptors. Among them, CXCR4 (fusin, LESTR or HUMSTR) is a principal coreceptor for T-cell tropic strains of HIV-1 fusion and entry of human white blood cells. CXCR4 is also required for the infection by dual-tropic strains of HIV-1 and mediates CD-4 independent infection by HIV-2. The α-chemokine SDF-1 is the ligand for CXCR4 and prevents infection by T-tropic HIV-1. CXCR4 associates with the surface CD4-gp120 complex before HIV enters target cells. CXCR4 messenger RNA levels correlated with HIV-1 permissiveness in diverse human cell types. Antibodies to CXCR4 block HIV-1 and HIV-2 fusion and infection of human target cells. The amino-terminal domain and the second extracellular loop of CXCR4 serve as HIV binding sites. Anti-CXCR4 antibodies are ideal for investigators involved in Cytokines and Growth Factors or Infectious Disease research.
Synonyms:	CXCR4 (NT), CXCR4, C-X-C chemokine receptor type 4, FB22, Fusin, HM89, LCR1, Leukocyte-derived seven transmembrane domain receptor, NPYRL, Stromal cell-derived factor 1 receptor, SDF-1 receptor
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	CXCR4
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	CXCR4 Antibody was produced from whole rabbit serum prepared by repeated immunizations with a peptide corresponding to amino acids near the n-terminus of human CXCR4.
Purity/Specificity:	Anti-CXCR4 Antibody is affinity chromatography purified via peptide column. A BLAST analysis was used to suggest cross-reactivity with CXCR4 with Human and Mouse based on 100% homology with the immunizing sequence. Cross-reactivity with CXCR4 from other sources has not been determined. No reaction to the 84 kDa STAT1a.
Relevant Links:	UniProtKB - P61073 GenelD - 7852

Application Details

Tested Applications:	ELISA, FC, IF, IHC, IP, WB
Application Note:	Anti-CXCR4 Antibody is tested for use in E, WB, ICC, IP, IF, and FACS. Expect a band approximately ~39.7 kDa on specific lysates. Western Blot in human, mouse, and rat samples; Immunohistochemistry, Immunocytochemistry and Immunofluorescence in human samples; Flow Cytometry in human and mouse samples. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
FC:	0.1µg/mL
IF:	10µg/mL
IHC:	5µg/mL
IP:	2µg/mL
WB:	1-2 ug/mL

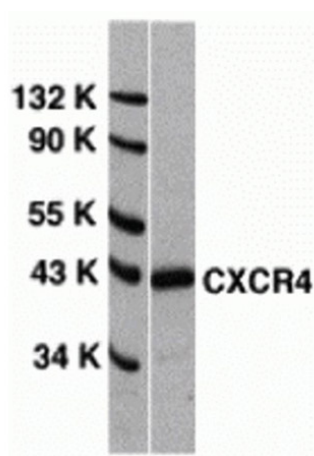
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



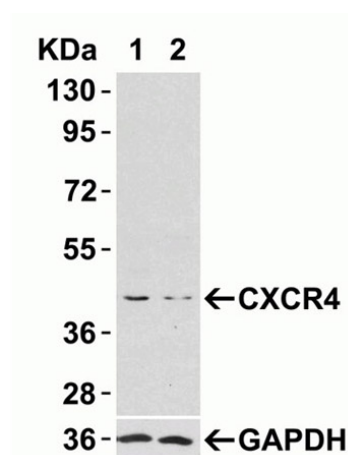
Western Blot

Western Blot Validation of CXCR4.

Loading: 15 µg of HeLa cell lysates per lane.

Primary Antibody: Anti-CXCR4 at 1µg/mL for 1h at RT in 5% NFDm/TBST.

Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



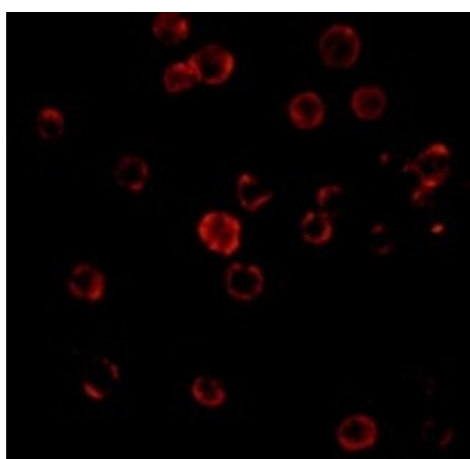
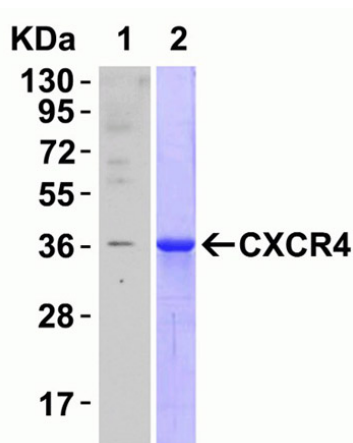
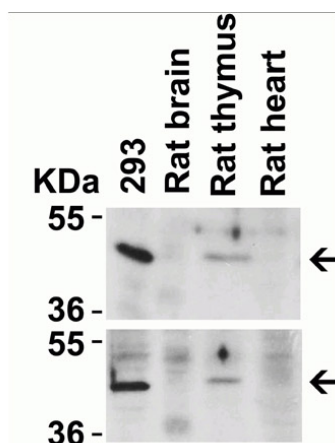
Western Blot

Western Blot Validation of CXCR4 siRNA Knockdown.

Loading: 10 µg of HeLa whole cell lysates per lane. HeLa cells were transfected with control siRNAs (lane 1) or CXCR4 siRNAs (lane 2).

Primary Antibody: Anti-CXCR4 at 2µg/mL for 1h at RT in 5% NFDm/TBST.

Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



Western Blot

Animal Species Reactivity Western Blot Validation of CXCR4. Loading: 20 µg per lane. Lane 1: 293 lysate, Lane 2: Rat Brain lysate, Lane 3: Rat Thymus lysate, Lane 4: Rat Heart lysate. Primary Antibody: top panel Anti-CXCR4 (p/n 200-401-G91) at 2 µg/mL, bottom panel (p/n 600-401-G92) at 2 µg/mL for 1h at RT in 5% NFDN/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

Western Blot

Recombinant Protein Test Western Blot Validation of CXCR4.

Loading: CXCR4 partial recombinant protein (Novus Biologicals, Cat# H00007852-Q01).

Lane 1: Primary antibody Anti-CXCR4 antibody at 0.1 µg/mL for 1h at RT in 5% NFDN/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

Lane 2: Coomassie blue staining.

Immunofluorescence Microscopy

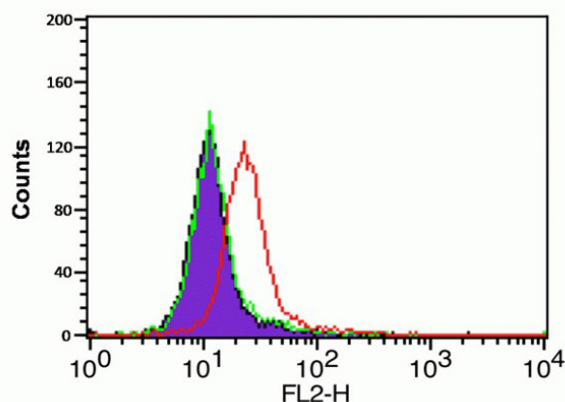
Immunofluorescence Validation of CXCR4.

Cells: HeLa cells.

Fixation: 4% paraformaldehyde.

Primary: Anti-CXCR4 at 20 µg/mL.

Secondary: goat anti-rabbit IgG at 1:500 dilution (red). Image showing both membrane and cytoplasmic staining on HeLa cells.



Flow Cytometry

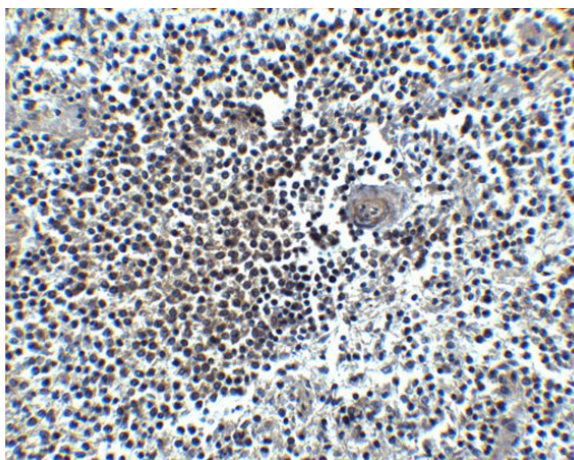
Flow Cytometry Validation of CXCR4

Cells: HeLa cells.

Overlay histogram showing HeLa cells stained with Anti-CXCR4 at $1\mu\text{g}/1 \times 10^6$ cells (red line) for 1h at 4°C in 2% FBS/PBS.

Followed by secondary antibody 488 goat anti-rabbit IgG (H +L) at 1:500 dilution for 1h at 4°C .

Isotype control mouse IgG1 antibody at $1\mu\text{g}/1 \times 10^6$ cells (green line) used under the same conditions.



Immunohistochemistry

Immunohistochemistry Validation of CXCR4.

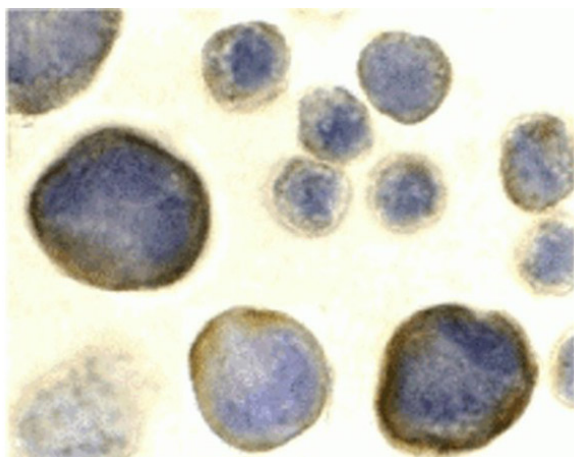
Tissue: Human Spleen.

Fixation: paraffin-embedded, formaldehyde and blocked with 10% serum for 1 h at RT.

Antigen retrieval: heat mediation with a citrate buffer (pH6).

Primary: anti-CXCR4 antibody at $5\mu\text{g}/\text{ml}$ overnight at 4°C .

Secondary: goat anti-rabbit IgG H&L (HRP) at 1:250. Counter stained with Hematoxylin.



Immunocytochemistry

Immunocytochemistry Validation of CXCR4.

Cells: HeLa cells.

Fixation: formaldehyde and blocked with 10% serum for 1 h at RT.

Antigen retrieval: heat mediation with a citrate buffer (pH6).

Primary: anti-CXCR4 antibody at $2\mu\text{g}/\text{ml}$ overnight at 4°C .

Secondary: goat anti-rabbit IgG H&L (HRP) at 1:250 was used as secondary. Counter stained with Hematoxylin.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.