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Datasheet for 600-401-G92

CXCR4 Antibody

Overview

Description:	Anti-CXCR4 (RABBIT) Antibody - 600-401-G92
Item No.:	600-401-G92
Size:	100 µg
Applications:	ELISA, IF, IHC, 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 a-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 biding 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 an internal sequence in the second extracellular loop (EL) of human CXCR4.
Purity/Specificity:	Anti-CXCR4 Antibody was protein A purified. 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.
Relevant Links:	• NCBI - NP_003458 • UniProtKB - P61073 • GeneID - 7852

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-CXCR4 Antibody is tested for use in E, IF, IHC, and WB. Expect a band approximately ~39.7 kDa on specific lysates. 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.
IF:	4µg/mL
IHC:	5µg/mL
WB:	1-2µg/mL

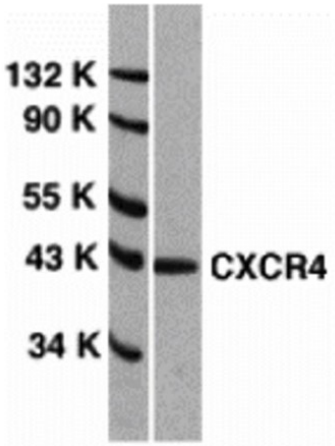
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1 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

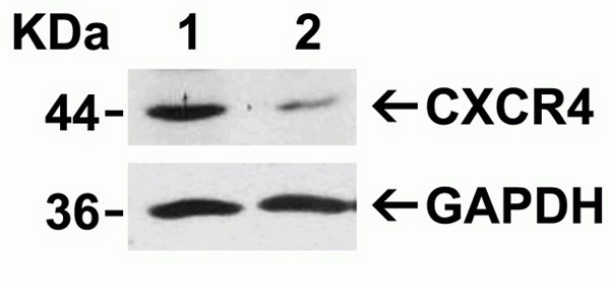
Shipping & Handling

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.

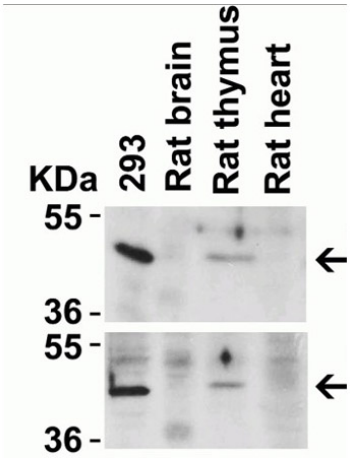
Images



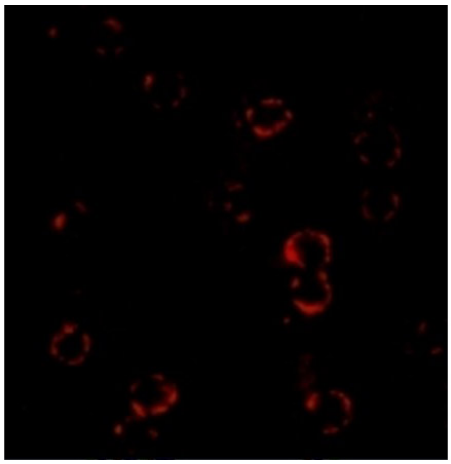
Western Blot
Western Blot Validation of CXCR4.
Loading: 15 µg of HeLa cell lysates per lane.
Primary Antibody: Anti-CXCR4 at 1µg/mL for 1h at RT in 5% NFDM/TBST.
Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



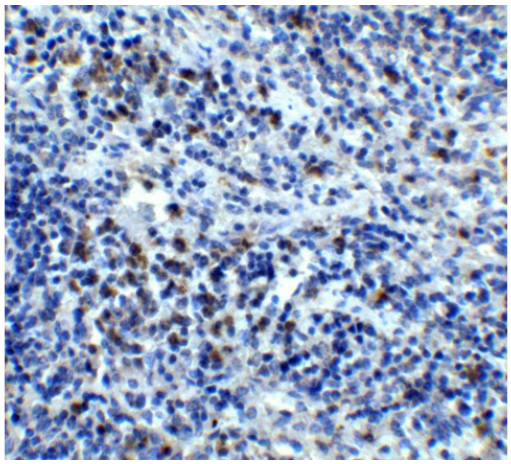
Western Blot
Western Blot Validation of CXCR4 siRNA Knockdown.
Loading: 10 µg of HeLa whole cell lysates per lane. HeLa cells were transfected with control siRNAs (lane 1) or CXCR4 siRNAs (lane 2).
Primary Antibody: Anti-CXCR4 at 2µg/mL for 1h at RT in 5% NFDM/TBST.
Secondary: Goat anti-rabbit IgG HRP 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 2µg/mL, bottom panel (p/n 600-401-G92) at 2µg/mL for 1h at RT in 5% NFDM/TBST.
Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

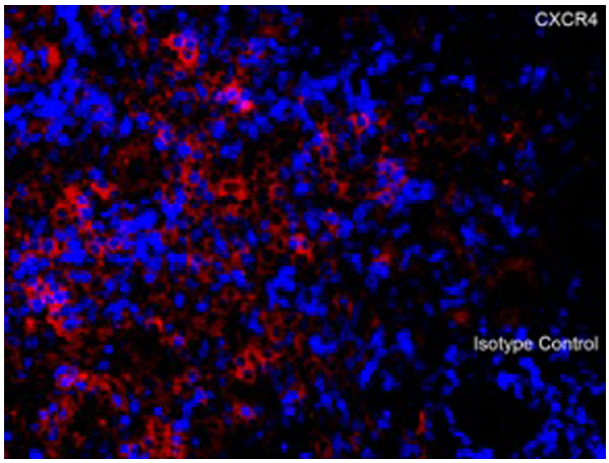


Immunofluorescence Microscopy
Immunofluorescence Validation of CXCR4.
Cells: HeLa cells.
Fixation: 4% paraformaldehyde.
Primary: Anti-CXCR4 at 4 µg/mL.
Secondary: goat anti-rabbit IgG at 1:500 dilution (red). Image showing both membrane and cytoplasmic staining on HeLa cells.

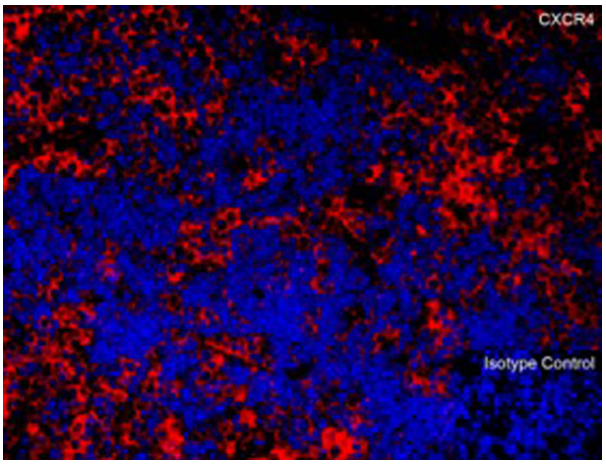


Immunohistochemistry
Immunohistochemistry Validation of CXCR4.
Tissue: Human Spleen.
Fixation: paraffin-embedded, formaldehyde and blocked with 10% serum for 1 h at RT.
Antigen retrieval: heat mediation with a citrate buffer (pH6).

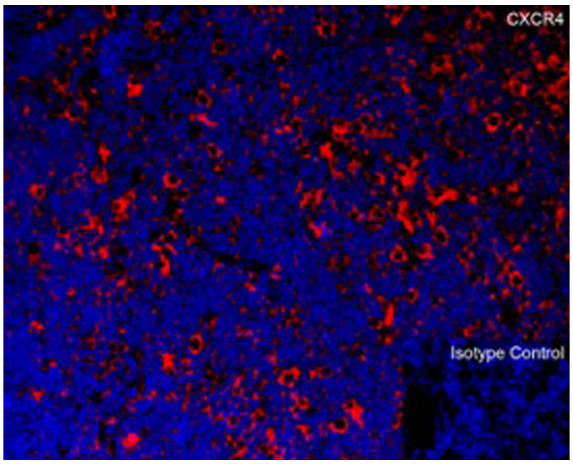
Primary: anti-CXCR4 antibody at 5 µg/ml overnight at 4°C.
Secondary: goat anti-rabbit IgG H&L (HRP) at 1:250. Counter stained with Hematoxylin.



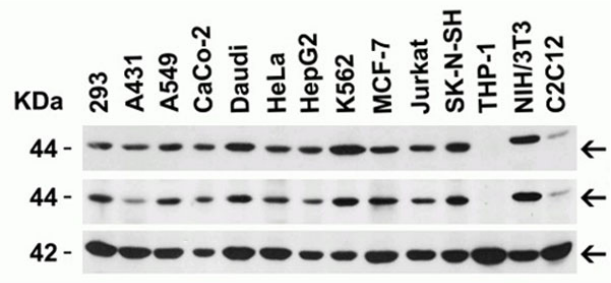
Immunofluorescence Microscopy
Immunofluorescence of CXCR4.
Tissue: Human Spleen.
Fixation: 4% paraformaldehyde-fixed.
Primary Antibody: CXCR4 at 20 µg/mL.
Secondary: goat anti-rabbit IgG antibody at 1:500 dilution (red) and DAPI staining (blue).



Immunofluorescence Microscopy
Immunofluorescence of CXCR4.
Tissue: Mouse Thymus.
Fixation: 4% paraformaldehyde-fixed.
Primary Antibody: CXCR4 at 20 µg/mL.
Secondary: goat anti-rabbit IgG antibody at 1:500 dilution (red) and DAPI staining (blue).



Immunofluorescence Microscopy
Immunofluorescence of CXCR4.
Tissue: Rat Thymus.
Fixation: 4% paraformaldehyde-fixed.
Primary Antibody: CXCR4 at 20 µg/mL.
Secondary: goat anti-rabbit IgG secondary antibody at 1/500 dilution (red) and DAPI staining (blue).



Western Blot
Western Blot of CXCR4.
Load: 15 µg of lysates per lane.
Primary Antibodies: TOP: human CXCR1 (n-term) (1 µg/mL), MIDDLE: human CXCR1 (internal) (p/n 600-401-G92) (1 µg/mL), and BOTTOM: beta-actin (1 µg/mL), for 1 h incubation at RT in 5% NFDM/TBST.
Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.

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