

Rabbit CXCR4 Polyclonal Antibody | anti-CXCR4 antibody

Phospho-CXCR4 (Ser339) Antibody

CATALOG # AAA329264	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunohistochemistry
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PRODUCT SYNONYMS

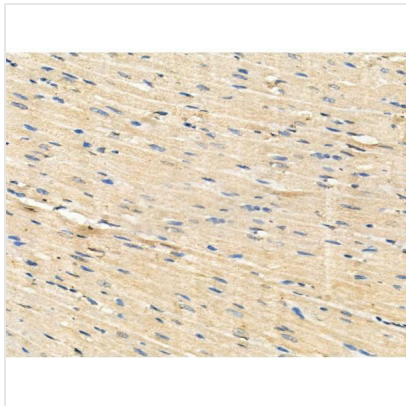
CXCR4; Polyclonal Antibody; Phospho-CXCR4 (Ser339) Antibody; C-X-C chemokine receptor type 4; CD184; CD184 antigen; Chemokine (C X C motif) receptor 4; Chemokine CXC Motif Receptor 4; CXC-R4; CXCR-4; CXCR4_HUMAN; D2S201E; FB22; Fusin; HM89; HSY3RR; LAP 3; LAP3; LCR1; LESTR; Leukocyte derived seven transmembrane domain receptor; Leukocyte-derived seven transmembrane domain receptor; Lipopolysaccharide associated protein 3; Neuropeptide Y receptor Y3; NPY3R; NPYR; NPYRL; NPY3; NPY3R; Probable G protein coupled receptor lcr1 homolog; SDF 1 receptor; SDF-1 receptor; SEVEN-TRANSMEMBRANE-SEGMENT RECEPTOR; Stromal cell derived factor 1 receptor; Stromal cell-derived factor 1 receptor; WHIM; WHIMS; anti-CXCR4 antibody

PRODUCT SPECIFICATIONS

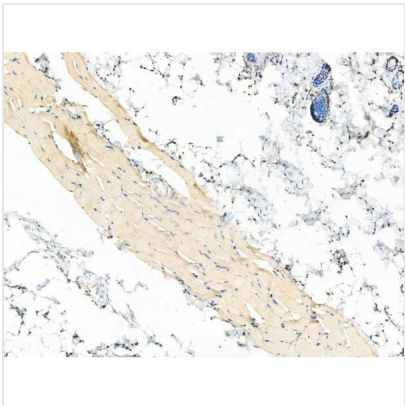
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-CXCR4 (Ser339) Antibody detects endogenous levels of CXCR4 only when phosphorylated at Ser339. Tissue Specificity: Expressed in numerous tissues, such as peripheral blood leukocytes, spleen, thymus, spinal cord, heart, placenta, lung, liver, skeletal muscle, kidney, pancreas, cerebellum, cerebral cortex and medulla (in microglia as well as in astrocytes), brain microvascular, coronary artery and umbilical cord endothelial cells. Isoform 1 is predominant in all tissues tested.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-CXCR4 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry)
Immunogen	A synthesized peptide derived from human CXCR4 around the phosphorylation site of Ser339.
Conjugation	Unconjugated
Fragment	Fab fragment

Post Translational Modifications	Phosphorylated on agonist stimulation. Rapidly phosphorylated on serine and threonine residues in the C-terminal. Phosphorylation at Ser-324 and Ser-325 leads to recruitment of ITCH, ubiquitination and protein degradation. Ubiquitinated after ligand binding, leading to its degradation. Ubiquitinated by ITCH at the cell membrane on agonist stimulation. The ubiquitin-dependent mechanism, endosomal sorting complex required for transport (ESCRT), then targets CXCR4 for lysosomal degradation. This process is dependent also on prior Ser-/Thr-phosphorylation in the C-terminal of CXCR4. Also binding of ARRB1 to STAM negatively regulates CXCR4 sorting to lysosomes though modulating ubiquitination of SFR5S. Sulfation on Tyr-21 is required for efficient binding of CXCL12/SDF-1alpha and promotes its dimerization. Tyr-7 and Tyr-12 are sulfated in a sequential manner after Tyr-21 is almost fully sulfated, with the binding affinity for CXCL12/SDF-1alpha increasing with the number of sulfotyrosines present. Sulfotyrosines Tyr-7 and Tyr-12 occupy clefts on opposing CXCL12 subunits, thus bridging the CXCL12 dimer interface and promoting CXCL12 dimerization. O- and N-glycosylated. Asn-11 is the principal site of N-glycosylation. There appears to be very little or no glycosylation on Asn-176. N-glycosylation masks coreceptor function in both X4 and R5 laboratory-adapted and primary HIV-1 strains through inhibiting interaction with their Env glycoproteins. The O-glycosylation chondroitin sulfate attachment does not affect interaction with CXCL12/SDF-1alpha nor its coreceptor activity.
Subunit Structure	Monomer. Can form homodimers. Interacts with CD164. Interacts with ARRB2; the interaction is dependent on the C-terminal phosphorylation of CXCR4 and allows activation of MAPK1 and MAPK3. Interacts with ARRC; the interaction is dependent on the C-terminal phosphorylation of CXCR4 and modulates calcium mobilization. Interacts with RNF113A; the interaction, enhanced by CXCL12, promotes CXCR4 ubiquitination and subsequent degradation. Interacts (via the cytoplasmic C-terminal) with ITCH (via the WW domains I and II); the interaction, enhanced by CXCL12, promotes CXCR4 ubiquitination and leads to its degradation. Interacts with extracellular ubiquitin. Interacts with DBN1; this interaction is enhanced by antigenic stimulation. Following LPS binding, may form a complex with GDF5, HSP90AA1 and HSPA8. (Microbial infection) Interacts with HIV-1 surface protein gp120 and Tat. (Microbial infection) Interacts with HHV-8 protein ORF K4. (Microbial infection) May interact with human cytomegalovirus/HHV-5 protein UL78. (Microbial infection) Interacts with Staphylococcus aureus protein SSL10.
Similarity	The amino-terminus is critical for ligand binding. Residues in all four extracellular regions contribute to HIV-1 coreceptor activity. Belongs to the G-protein coupled receptor 1 family.
Subcellular Location	Cell membrane>Multi-pass membrane protein. Cell junction. Early endosome. Late endosome. Lysosome. Note: In unstimulated cells, diffuse pattern on plasma membrane. On agonist stimulation, colocalizes with ITCH at the plasma membrane where it becomes ubiquitinated. In the presence of antigen, distributes to the immunological synapse forming at the T-cell-APC contact area, where it localizes at the peripheral and distal supramolecular activation cluster (SMAC).
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)
Staining Rat heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)
At 1/100 staining Rat skin tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-CXCR4 antibody	Receptor for the C-X-C chemokine CXCL12/SDF-1 that transduces a signal by increasing intracellular calcium ion levels and enhancing MAPK1/MAPK3 activation. Involved in the AKT signaling cascade. Plays a role in regulation of cell migration, e.g. during wound healing. Acts as a receptor for extracellular ubiquitin; leading to enhanced intracellular calcium ions and reduced cellular cAMP levels. Binds bacterial lipopolysaccharide (LPS) et mediates LPS-induced inflammatory response, including TNF secretion by monocytes. Involved in hematopoiesis and in cardiac ventricular septum formation. Also plays an essential role in vascularization of the gastrointestinal tract, probably by regulating vascular branching and/or remodeling processes in endothelial cells. Involved in cerebellar development. In the CNS, could mediate hippocampal-neuron survival (By similarity). (Microbial infection) Acts as a coreceptor (CD4 being the primary receptor) for human immunodeficiency virus-1/HIV-1 X4 isolates and as a primary receptor for some HIV-2 isolates. Promotes Env-mediated fusion of the virus.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	56790927
NCBI GeneID	7852
NCBI Accession #	NP_001008540.1
NCBI GenBank Nucleotide #	NM_001008540.1
UniProt Accession #	P61073; O60835; P30991; P56438; Q53S69; Q9BXA0; Q9UKN2; B2R5N0
Molecular Weight	39,746 Da
NCBI Official Full Name	C-X-C chemokine receptor type 4 isoform a
NCBI Official Synonym Full Names	chemokine (C-X-C motif) receptor 4
NCBI Official Symbol	CXCR4
NCBI Official Synonym Symbols	FB22; HM89; LAP3; LCR1; NPYR; WHIM; CD184; LESTR; NPY3R; NPYRL; HSY3RR; NPYY3R; D2S201E
NCBI Protein Information	C-X-C chemokine receptor type 4; fusin; CXC-R4; CXCR-4; CD184 antigen; SDF-1 receptor; neuropeptide Y receptor Y3; seven transmembrane helix receptor; stromal cell-derived factor 1 receptor; lipopolysaccharide-associated protein 3; seven-transmembrane-seg
UniProt Protein Name	C-X-C chemokine receptor type 4
UniProt Gene Name	CXCR4
UniProt Synonym Gene Names	CXC-R4; CXCR-4; LESTR
UniProt Entry Name	CXCR4_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/cxcr4-antibody-peptide-elisa-immunohistochemistry-elisa/329264>