

Rabbit Polyclonal Anti-CXCR4 antibody

Catalog Number: CXCR4-401AP

Lot Number:

General Information

Product	CXCR4 Antibody
Accession #	Uniprot: P61073 GenBank: CAA12166
Verified Applications	CM, ELISA, ICC, IF, IHC, IMM, WB
Species Cross Reactivity	Human, Mouse, Rat
Host	Rabbit
Immunogen	Synthetic peptide taken within amino acid region 15-65 on CXCR4 protein.
Alternative Nomenclature	C-X-C chemokine receptor type 4 antibody, CD184 antibody, Chemokine (C X C motif) receptor 4 antibody, D2S201E antibody, FB22 antibody, Fusin antibody, HM89 antibody, HSY3RR antibody, LCR1 antibody, LESTR antibody, Leukocyte derived seven transmembrane domain receptor antibody, Lipopolysaccharide associated protein 3 antibody, Neuropeptide Y receptor Y3 antibody, NPY3R antibody, SDF 1 receptor antibody, Stromal cell-derived factor 1 receptor antibody, WHIM antibody

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Immunoglobulin & Concentration	.50 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20°C for long term storage.

Recommended Dilutions

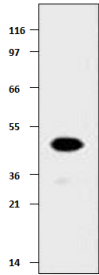
DOT Blot	1:10,000
ELISA	1:10,000
Immunocytochemistry	1:250
Immunofluorescence	1:250
Immunohistochemistry	1:250
Immunoprecipitation	1:250
Western Blot	1:500

Related Products

Catalog

FITC-Conjugated	CXCR4-FITC
BIOTIN-Conjugated	CXCR4-BIOTIN
Antigenic Blocking Peptide	P-CXCR4
Western Blot Positive Control	PC-CXCR4

Application Verification:



WB of CXCR4-401AP with PC-CXCR4. 1:500 antibody, dilution in DiluObuffer

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

Chemoattractant Cytokines (Chemokines) are small peptides that are potent activators and chemo-attractants for leukocyte subpopulations and other nonhematopoietic cells. Chemokine receptors belong to the super-family of G protein-coupled receptors (GPCR), which regulate the trafficking and activation of leukocytes, and operate as co-receptors in the entry of HIV-1 and direct the proliferation and migration of immature neurons, glia and their precursors (1). Chemokine receptors participate in the etiology and progression of various brain disorders, including AIDS dementia, neuro-inflammatory disease and neuroplasia, making them important potential therapeutic targets. Induction of chemokines and infiltration of chemokine receptor-bearing cells has also been shown in a variety of animal models of renal diseases, as well as in human diseases and allograft rejection (2)

Activation of naïve T cells by specific antigen and cytokines, up-regulate cell adhesion molecules (CAM) as well as chemokine receptors on their surface, which directs them to migrate towards the inflamed tissues. Several subtypes of CXCR have been characterized. CXCR4 is the receptor for the stromal cell derived factor 1 (SDF1), that has essential functions on embryo organogenesis, immunological functions and T lymphocyte trafficking. The CXCR4 is identified as a co-factor required for the entry of lymphotropic HIV isolates in CD4⁺ T lymphocytes (1). The CXCR4 gene contains two exons separated by an intronic sequence. A 2.6 kb 5'-flanking region located upstream the CXCR4 open reading frame contains a TATA box and the transcription start site characteristic of a functional promoter. This region also has binding motifs for different transcription factors associated with hemopoiesis and lymphocyte development (3).

The CXCR4 receptor protein is approximately a 45kDa (360 amino acids) protein which has 7 transmembrane domains, characteristic of G-protein coupled receptors. The protein has putative N-glycosylation sites near the extra cellular N-terminal end of the protein. The protein has a large 3rd intra cellular loop which interacts with G-proteins. The short carboxy terminal is intracellular and has putative post-translational sites. The CXCR4 antibodies were affinity purified on an immobilized antigen based affinity chromatography. Western blot positive control (PC-CXCR4) and antigenic blocking peptide (P-CXCR4) are available. FabGennix carries antibodies against several other GPCRs, for a complete listing please visit <http://fabgennix.com>.

References:

1. Tran PB, Miller R.J. Nat Rev Neurosci. 2003 4:444-55
2. Segerer S. Am J Kidney Dis. 2003 41, :S15-8.
3. Caruz A, Samsom M, Alonso JM, Alcamí J, Baleux F, Virelizier JL, Parmentier M, Arenzana-Seisdedos F. Genomic organization and promoter characterization of human CXCR4 gene. FEBS Lett. 1998 Apr 17;426(2):271-8. Related Articles, Links

For users who may require large amounts of the products listed above, please inquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.