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## Chemokine Receptor selective antibodies

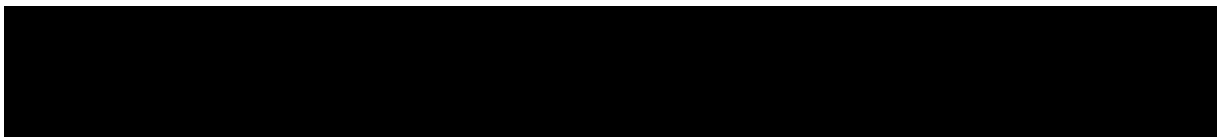
### Anti-Chemokine Receptor 7 (CCR7) Receptor Antibodies (Cat # CCR-701AP)

Chemokine (Chemoattractant Cytokines) are small peptides that are potent activators and chemo-attractants for leukocyte subpopulations and other non-hemopoietic cells. Chemokine receptors (CCR) 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 proliferation and migration of immature neurons, glia and their precursors (1). Furthermore, chemokine receptors participate in the etiology and progression of various brain disorders, including AIDS dementia, neuro-inflammatory disease and neuropathology, making them important potential therapeutic targets in these cases several subtypes of CCR have been characterized (Table1).

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. Chemokine receptor type 3 (CCR3) is induced during T cell activation and CCR3 positive cell are enriched at the inflammatory site (2). On the contrary, glucocorticoid dexamethasone has potent anti-inflammatory effects, yet it up-regulates expression of CCR4 but not that of CCR1 and CCR3 (4). The chemokine receptor CCR7 and CXCR4 have been suggested to play important role in cancer invasion and metastasis. CCR7 expression may be associated with lymph node metastasis; moreover, the expression of these receptors can serve as an indicator of poor prognosis in patients with cervical and breast cancer (5). CCR7 and its ligands CCL19 and CCL21 are a chemokine system related to mononuclear cell migration and antigen presentation, and are suggested to play a key role in several autoimmune disorders.

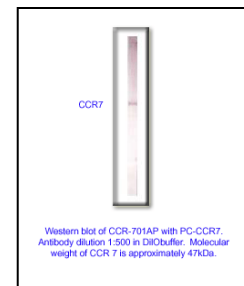
The chemokine receptor 7 protein is approximately 52-54kDa protein which has 7 transmembrane domains, characteristic of G-protein coupled receptors. The protein has putative N-glycosylation sites near the extra cellular N-terminal end of the proteins. The CCR7 protein also has a large 3<sup>rd</sup> intra cellular loop which interacts with G-proteins and other signal transduction molecules. The short carboxy terminal is intracellular and has putative post-translational sites. The Anti-CCR7-selective antibodies were generated against amino terminal end of the protein that is conserved but unique for CCR7 receptor. This epitope is not expressed in any other CCR or CXCR receptors family members. The mono-epitope specific polyclonal antibodies are affinity purified on an immobilized antigen based affinity chromatography. The epitope-specific antibodies strongly label CCR7 chemokine receptor in CCR7 western blot positive control samples. FabGennix provides subtype selective affinity purified antibodies to various other CCR and CXCR family members, for a complete listing please visit [www.fabgennix.com](http://www.fabgennix.com). Anti-CCR-selective antibodies can also be made available in the form of fluorescent conjugates for direct application in IHC upon request at extra charge. FabGennix, Inc., will also provide Western blot positive controls and limited quantity of antigenic blocking peptides for most of these antibodies in ready-to-use buffer for easy identification of respective proteins are also available, please inquire about their availability before ordering.

	Type	Cat #	Expression
1	CCR1	CCR-101AP	Melanoma, leukocytes, microglia, EC, podocytes
2	CCR2	CCR-201AP	Intestinal microvascular cells
3	CCR3	CCR-301AP	Microglia, podocytes
4	CCR4	CCR-401AP	
5	CCR5	CCR-501AP	Podocytes,
6	CCR6	CCR-601AP	
6	CCR7	CCR-701AP	



R = rat; M = mouse; H = human; C = chicken; monk = monkey ; \* For 5 applications

- Immunogen:** Synthetic peptide (selective for CXCR7 receptor N-terminal region)
- Concentration:** CCR-701AP IgG concentration 0.65-1.25 mg/ml in antibody stabilization buffer.
- Applications:** Antibody CCR-701AP is ideal for WB, IHC and confocal applications. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. WB > 1:500; IMM & i.p pull-down assays > 1:250
- Reactivity:** This antibody detects a single 52-53kDa CCR7 in PC-CCR7 samples.
- Protocols:** Standard protocol for various applications (WB, IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc., strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.
- Form/Storage:** The antiserum is supplied in antibody stabilization buffer with preservative. For long-term storage of antibodies, store at -20°C. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45µm filter after every use for long-term storage.
- Notes: Note:** Briefly centrifuge to collect liquid, heat PC-CCR7 tube in 90°C water bath for 1-2 minutes to dissolve any precipitate before use. This product is "ready-to-use" for electrophoresis. After thawing store at room temperature, Repeated freezing and thawing may result in appearance of higher molecular weight immunoreactive bands.  
Now Western blots can easily be stripped and recycle using our specially formulated StripOBuffer (Cat # FGI-1989). This stripping buffer does not require heating or have any pungent smell.



#### References:

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- Xie JH, Nomura N, Lu M, Chen SL, et al., J Leukoc Biol. 2003, 73:771-80.
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- Ramjeesingh R, Leung R, Siu CH. FASEB J. 2003 May 8 [Epub ahead of print].
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- Kodama J, Hasengawa . at., al., Association of CXCR4 and CCR7 chemokine receptor expression and lymph node metastasis in human cervical cancer. Ann Oncol. 2007 Jan;18(1):70-6. Epub 2006.

\* For users who may require large amounts of CCR-701AP, please enquire about bulk material discounts.  
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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