# CCR5 Blocking Peptide – >85% Purity

## PRODUCT OVERVIEW

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| **Product Name** | CCR5, Blocking Peptide |
| **Full Product Name** | CCR5 Blocking Peptide |
| **Product Gene Name** | CCR5 blocking peptide |
| **Product Synonym Names** | CMKBR5; C-C chemokine receptor type 5; C-C CKR-5; CC-CKR-5; CCR-5; CCR5; CHEMR13; HIV-1 fusion coreceptor; CD195 |
| **Host** | Synthetic |
| **Species Reactivity** | Human, Mouse, Bovine, Monkey, Rabbit |
| **Form/Format** | Lyophilized Powder |
| **Purity/Purification** | >85% |
| **Preparation and Storage** | Store at -20 degree C for one year. |
| **Molecular Weight** | 40,524 Da |
| **Chromosome Location** | Chromosome: 3; NC_000003.11 (46411633..46417697). Location: 3p21.31 |
| **OMIM** | 601373 |
| **Quality Control** | The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. |
| **Directions for Use** | Blocking Peptide to the diluted primary antibody in a molar ratio of 10:1 (peptide to antibody) and incubate the mixture at 4 degree C for overnight or at room temperature for 2 hours. |
| **Applications Tested/Suitable for CCR5 blocking peptide** | Blocking (BL) |
| **Related Product Information for CCR5 blocking peptide** | MBS8309103 is a blocking peptide targeting CCR5. Reactive in Human, Mouse, Bovine, Monkey, Rabbit. Host: Synthetic. The peptide is used to block Anti-CCR5 Antibody reactivity. |
| **Other Notes** | Small volumes of CCR5 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CCR5. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 4502639 |
| **NCBI GeneID** | 1234 |
| **NCBI Accession #** | NP_000570.1 |
| **UniProt Primary Accession #** | P51681 |
| **UniProt Secondary Accession #** | P51682 |
| **UniProt Related Accession #** | P51681 |
| **GenBank Nucleotide #** | NM_000579.3 |
| **NCBI Official Full Name** | C-C chemokine receptor type 5 |

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| **NCBI Official Synonym Full Names** | chemokine (C-C motif) receptor 5 (gene/pseudogene) |
| **NCBI Official Symbol** | CCR5 |
| **NCBI Official Synonym Symbols** | CKR5; CCR-5; CD195; CKR-5; CCCKR5; CMKBR5; IDDM22; CC-CKR-5 |
| **UniProt Protein Name** | C-C chemokine receptor type 5 |
| **UniProt Synonym Protein Names** | CHEMR13; HIV-1 fusion coreceptor |
| **Protein Family** | C-C chemokine receptor |
| **UniProt Gene Name** | CCR5 |
| **UniProt Synonym Gene Names** | CMKBR5; C-C CKR-5; CC-CKR-5; CCR-5; CCR5 |
| **UniProt Entry Name** | CCR5_HUMAN |
| **NCBI Protein Information** | C-C chemokine receptor type 5; chemr13; HIV-1 fusion coreceptor; chemokine receptor CCR5; C-C motif chemokine receptor 5 A159A |
| **NCBI Summary for CCR5** | This gene encodes a member of the beta chemokine receptor family, which is predicted to be a seven transmembrane protein similar to G protein-coupled receptors. This protein is expressed by T cells and macrophages, and is known to be an important co-receptor for macrophage-tropic virus, including HIV, to enter host cells. Defective alleles of this gene have been associated with the HIV infection resistance. The ligands of this receptor include monocyte chemoattractant protein 2 (MCP-2), macrophage inflammatory protein 1 alpha (MIP-1 alpha), macrophage inflammatory protein 1 beta (MIP-1 beta) and regulated on activation normal T expressed and secreted protein (RANTES). Expression of this gene was also detected in a promyeloblastic cell line, suggesting that this protein may play a role in granulocyte lineage proliferation and differentiation. This gene is located at the chemokine receptor gene cluster region. Two transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Jul 2008] |
| **UniProt Comments for CCR5** | CCR5: a 7-transmembrane G-linked receptor for a number of inflammatory C-C type chemokines including MIP-1-alpha, MIP-1-beta and RANTES. Transduces a signal by increasing the intracellular calcium ion level. May play a role in the control of granulocytic lineage proliferation or differentiation. Acts as a coreceptor (along with CD4) for HIV-1 R5 isolates. Interacts with PRAF2. Interacts with HIV-1 surface protein gp120. Efficient ligand binding to CCL3/MIP-1alpha and CCR4/MIP-1beta requires sulfation, O-glycosylation and sialic acid modifications. Glycosylation on S6 is required for efficient binding of CCL4. Interacts with ADRBK1. Interacts with ARRB1 and ARRB2. Variations in CCR5 are associated with resistance or susceptibility to immunodeficiency virus type 1 (resistance or susceptibility to HIV-1). Variations in CCR5 gene also influence the rate of progression to AIDS after infection. R60S variant, a naturally occurring mutation in a conserved residue in the first intracellular domain of CCR5, results in reduced amounts of the protein in the membrane and consequently may be associated with reduced susceptibility to infection by microbes that depend on these molecules as their receptors. Variations in CCR5 are associated with susceptibility to West Nile virus (WNV) infection<br><br>Protein type: Receptor, GPCR; Motility/polarity/chemotaxis; Receptor, cytokine; GPCR, family 1; Membrane protein, integral; Membrane protein, multi-pass<br><br>Chromosomal Location of Human Ortholog: 3p21.31<br><br>Cellular Component: cell surface; integral to plasma membrane; cytoplasm; plasma membrane; endosome; external side of plasma membrane<br><br>Molecular Function: protein binding; C-C chemokine receptor activity; chemokine receptor activity; coreceptor activity; C-C chemokine binding; actin binding; phosphoinositide phospholipase C activity<br><br>Biological Process: viral reproduction; MAPKKK cascade; calcium-mediated signaling; chemotaxis; release of sequestered calcium ion by sarcoplasmic reticulum into cytosol; G-protein coupled receptor protein signaling pathway; elevation of cytosolic calcium ion concentration; cell surface receptor linked signal transduction; cell-cell signaling; calcium ion transport; cellular defense response; dendritic cell chemotaxis; entry into host cell; immune response; inflammatory response<br><br>Disease: West Nile Virus, Susceptibility To; Diabetes Mellitus, Insulin-dependent, 22; Hepatitis C Virus, Susceptibility To |

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| **Research Articles on CCR5** | **1.** The prognostic implications of two polymorphisms in TP53 (p.R72P, PIN3 Ins16bp) and one in CCR5 (CCR5/32) in sporadic breast cancer patients. |
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