# abcam

## Product datasheet

# CXCR4 peptide ab8126

#### 4 References

#### 製品の詳細

製品名 CXCR4 peptide

Animal free No

**由来** Synthetic

#### 特性

Our **Abpromise guarantee** covers the use of **ab8126** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション Blocking

製品の状態 Liquid

#### 前処理および保存

保存方法および安定性 Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw

cycles.

pH: 7.20

Preservative: 0.02% Sodium azide

Constituent: 0.1% BSA

### 関連情報

機能 Receptor for the C-X-C chemokine CXCL12/SDF-1 that transduces a signal by increasing

intracellular calcium ions levels and enhancing MAPK1/MAPK3 activation. Acts as a receptor for extracellular ubiquitin; leading to enhance intracellular calcium ions and reduce cellular cAMP levels. Involved in haematopoiesis and in cardiac ventricular septum formation. Plays also an essential role in vascularization of the gastrointestinal tract, probably by regulating vascular branching and/or remodeling processes in endothelial cells. Could be involved in cerebellar development. In the CNS, could mediate hippocampal-neuron survival. Acts as a coreceptor (CD4 being the primary receptor) for HIV-1 X4 isolates and as a primary receptor for some HIV-2

isolates. Promotes Env-mediated fusion of the virus.

組織特異性 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

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cord endothelial cells. Isoform 1 is predominant in all tissues tested.

関連疾患 Defects in CXCR4 are a cause of WHIM syndrome (WHIM) [MIM:193670]; also known as warts.

hypogammaglobulinemia, infections and myelokathexis. WHIM syndrome is an immunodeficiency

disease characterized by neutropenia, hypogammaglobulinemia and extensive human

papillomavirus (HPV) infection. Despite the peripheral neutropenia, bone marrow aspirates from affected individuals contain abundant mature myeloid cells, a condition termed myelokathexis.

Belongs to the G-protein coupled receptor 1 family.

ドメイン The amino-terminus is critical for ligand binding. Residues in all four extracellular regions

contribute to HIV-1 coreceptor activity.

翻訳後修飾 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 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.

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.

**細胞内局在** Cell membrane. In unstimulated cells, diffuse pattern on plasma membrane. On agonist

stimulation, colocalizes with ITCH at the plasma membrane where it becomes ubiquitinated.

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