

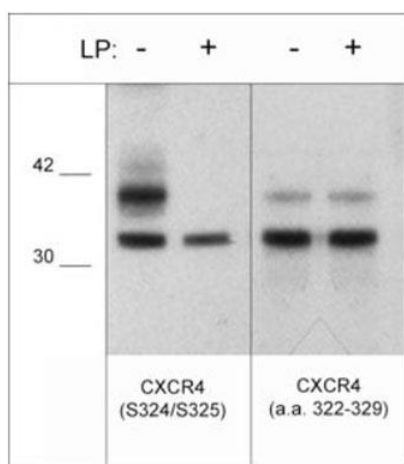
Product Datasheet

Anti-CXCR4 (Ser-324/Ser-325), Phosphospecific Antibody

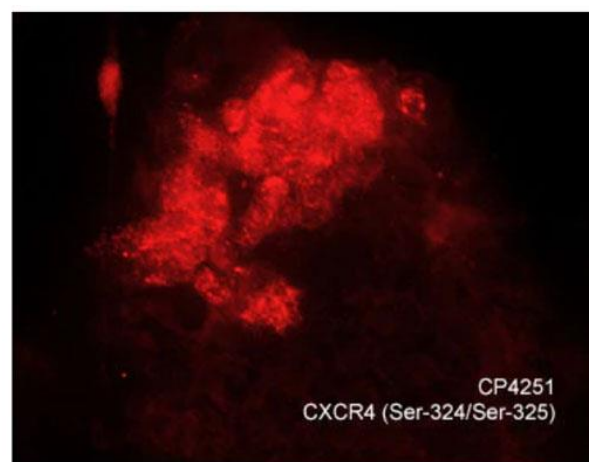
Overview

Catalog #	CP4251
Size	100 µL
Host Species	Rabbit Polyclonal
Format	Antigen Affinity Purified
Applications	WB 1:1000 IHC 1:100 ICC 1:100
Species Tested	Chicken, Human, Mouse, and Rat
Immunogen	Phospho-CXCR4 (Ser-324/Ser-325) synthetic peptide (coupled to carrier protein) corresponds to amino acids surrounding Ser-324 and Ser-325 in the C-terminal region of human CXCR4. This sequence is conserved in mouse, rat, and chicken CXCR4, but has low homology to other CXCR family members.
Molecular Weight	35, 42, 50, 100 kDa
Cite this Antibody	PhosphoSolutions Cat# CP4251, RRID:AB_10838828

Images



Western blot analysis of human Jurkat cells treated with 100 nM calyculin A for 30 min. then the blots were untreated (-) or treated (+) with lambda phosphatase. The blots were probed with rabbit polyclonals anti-CXCR4 (Ser-324/Ser-325) (left panel) or anti-CXCR4 (a.a. 322-329) (right panel).



Immunocytochemical labeling of CXCR4 in chick pluripotent cells. The cells were labeled with rabbit polyclonal CXCR4 (S324/S325) antibody (CP4251), then detected using appropriate secondary antibody (Red). (Image provided by Dr. Yangqing Lu at the Regenerative Bioscience Center, University of Georgia).

Details

Target Description	The chemokine receptor CXCR4 is a widely expressed G protein-coupled receptor required for development, hematopoiesis, organogenesis, and vascularization. In disease, CXCR4 has been implicated in WHIM syndrome, HIV, and cancers. Regulation of CXCR4 function occurs through phosphorylation at multiple sites in the C-terminal region. These sites have been shown to be phosphorylated after CXCL12 stimulation, and involve several kinases, such as PKC and GRK kinases. After CXCL12 stimulation of HEK293 cells, Ser-324 and Ser-325 become phosphorylated by PKC and GRK6, while Ser-330 and Ser-339 are phosphorylated by only GRK6. In human astroglia cells, Ser-324 and Ser-325 are rapidly phosphorylated in endogenous CXCR4, while Ser-330 was phosphorylated with slower kinetics. In addition, arrestin binding to CXCR4 is driven by this phosphorylation of far C-terminal residues. Thus, site-specific phosphorylation of CXCR4 may be regulated by multiple kinases lead to complex regulation of CXCR4 signaling.
Specificity	The antibody detects bands at 35, 42, 50, and 100 kDa* corresponding to various post-translationally modified forms of CXCR4 on SDS-PAGE immunoblots of human Jurkat and PC3 cells stimulated with calyculin A. These bands co-migrate with similar bands detected with anti-CXCR4 (a.a. 322-329) and anti-CXCR4 (a.a. 328-338) antibodies.
Quality Control	Western blots performed on each lot.
Buffer	PBS + 1 mg/ml BSA, 0.05% NaN ₃ and 50% glycerol
Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
Stability	After date of receipt, stable for at least 1 year at -20°C.

Significant Citations

Hitchinson, B., Eby, J.M., Gao, X., Guite-Vinet, F., Ziarek, J.J., Abdelkarim, H., Lee, Y., Okamoto, Y., Shikano, S., Majetschak, M. and Heveker, N., 2018. Biased antagonism of CXCR4 avoids antagonist tolerance. *Science Signaling*, 11(552), p.eaat2214.

Saint-Georges, S., Quettier, M., Bouyaba, M., Le Coquil, S., Laurienté, V., Guittat, L., Lévy, V., Ajchenbaum-Cymbalista, F., Varin-Blank, N., Le Roy, C. and Ledoux, D., 2016. Protein kinase D-dependent CXCR4 down-regulation upon BCR triggering is linked to lymphadenopathy in chronic lymphocytic leukaemia. *Oncotarget*, 7(27), p.41031.

Panneerselvam, J., Jin, J., Shanker, M., Lauderdale, J., Bates, J., Wang, Q., Zhao, Y.D., Archibald, S.J., Hubin, T.J. and Ramesh, R., 2015. IL-24 inhibits lung cancer cell migration and invasion by disrupting the SDF-1/CXCR4 signaling axis. *PLoS One*, 10(3), p.e0122439.

Yang, S., Edman, L.C., Sánchez-Alcañiz, J.A., Fritz, N., Bonilla, S., Hecht, J., Uhlén, P., Pleasure, S.J., Villaescusa, J.C., Marín, O. and Arenas, E., 2013. Cxcl12/Cxcr4 signaling controls the migration and process orientation of A9-A10 dopaminergic neurons. *Development*, 140(22), pp.4554-4564.

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