

ORDERING INFORMATION

Catalog Number: AF857

Lot Number: ZDN01

Size: 100 µg

Formulation: 0.2 µm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

Specificity: human XCR1

Immunogen: *E. coli*-derived rhXCR1 extracellular N-terminus and loops

Ig Type: goat IgG

Applications: Western blot
Immunocytochemistry
Flow Cytometry
Direct ELISA

Background

XCR1, also known as GPR5 and lymphotactin/SCM-1 (single cysteine motif 1) receptor, is a 38 kDa member of the G-protein coupled receptor 1 family. It binds XCL1/lymphotactin/SCM-1 α and XCL2/SCM-1 β . In addition, human herpesvirus 8 (HHV8) encodes two viral chemokines vCCL2/vMIP-II and vCCL3/vMIP-III that function as an antagonist and a highly selective agonist, respectively, for XCR1. XCR1 is expressed on neutrophils, CD8+ T cells, NK cells, CD4+ T cells and B cells. Human XCR1 is a 333 amino acid (aa), 7-transmembrane molecule. It contains a 32 aa N-terminus that lacks glycosylation sites and a 42 aa C-terminal cytoplasmic tail. Over the extracellular regions used for immunization, human XCR1 shares 62%, 54% and 64% aa identity with canine, mouse and porcine XCR1, respectively.

Preparation

Produced in a goat immunized with purified, *E. coli*-derived, recombinant human XCR1 extracellular N-terminus and loops (rhXCR1; aa 1 - 31, 89 - 103, 168 - 190, and 251 - 267, joined with linker peptides; Accession # P46094). Human XCR1 specific IgG was purified by human XCR1 affinity chromatography.

Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Reconstitution

Reconstitute with sterile PBS. If 0.5 mL of PBS is used, the antibody concentration will be 0.2 mg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a **manual defrost freezer** for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody has been selected for its ability to recognize human XCR1 in the applications listed below.

Applications

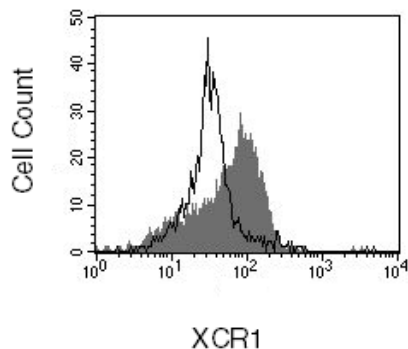
Western blot - This antibody can be used at 0.1 - 0.2 µg/mL with the appropriate secondary reagents to detect human XCR1. The detection limit for rhXCR1 is approximately 1 ng/lane under non-reducing and reducing conditions.

Immunocytochemistry - This antibody will detect XCR1 in cells. The working dilution is 15 µg/mL. For chromogenic detection of labeling, use R&D Systems' Cell and Tissue Staining Kits (CTS Series).

Flow Cytometry - This antibody was tested in flow cytometry using LPS-treated PBMCs. Dilute this antibody to 25 µg/mL and add 10 µL of the diluted solution to 1 - 2.5 x 10⁵ cells in a total reaction volume not exceeding 200 µL. The binding of unlabeled antibodies may be visualized by adding a secondary developing reagent such as anti-goat IgG conjugated to a fluorochrome.

Direct ELISA - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect human XCR1. The detection limit for rhXCR1 is approximately 0.5 ng/well.

Optimal dilutions should be determined by each laboratory for each application.



LPS-treated PBMCs were stained with anti-XCR1 (R&D Systems, Cat. # AF857, filled histogram), or control antibody (R&D Systems, Cat. # AB-108-C, open histogram) followed by PE-conjugated anti-goat antibody (R&D Systems, Cat. # F0107).