

Phospho-CXCR4 (Ser339) Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 45-60	Source/Isotype: Rabbit	UniProt ID: #P61073	Entrez-Gene Id: 7852
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Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-CXCR4 (Ser339) Antibody recognizes endogenous levels of CXCR4 protein only when phosphorylated at Ser339. This antibody does not cross-react with CXCR4 protein when phosphorylated at Ser324 or Ser325.

Species predicted to react based on 100% sequence homology

Mouse, Hamster, Chicken

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser339 of human CXCR4 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

CXCR4 is a chemokine receptor that belongs to the G protein-coupled receptor family. It is activated by a small cytokine, CXCL12, also known as stromal cell derived factor 1 (SDF1) (1). The main function of CXCR4 is the mediation of the homing of progenitor cells in the bone marrow and their recruitment to sites of injury (2). More recently, CXCR4 has been studied as a potential therapeutic target in the context of autoimmune diseases (3), as well as cancer, as the receptor is involved in the regulation of migration, proliferation, and survival of cancer cells (4).

CXCR4 is phosphorylated at Ser339 by G protein-coupled receptor kinase 6 upon treatment of cells with CXCL12 (5). Phosphorylation of CXCR4 at Ser339 has also been observed following epidermal growth factor and phorbol ester treatment (6). TCR-mediated transactivation of CXCR4 at Ser339 activates a PREX1-Rac1-signaling pathway that stabilizes interleukin-2, -4, and -10 messenger RNA transcripts (7).

Background References

1. Blanchet, X. et al. (2012) *Front Immunol* 3, 175.
2. Döring, Y. et al. (2014) *Front Physiol* 5, 212.
3. Debnath, B. et al. (2013) *Theranostics* 3, 47-75.
4. Teicher, B.A. and Fricker, S.P. (2010) *Clin Cancer Res* 16, 2927-31.
5. Busillo, J.M. et al. (2010) *J Biol Chem* 285, 7805-17.
6. Woerner, B.M. et al. (2005) *Cancer Res* 65, 11392-9.
7. Kremer, K.N. et al. (2017) *Blood* 130, 982-994.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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