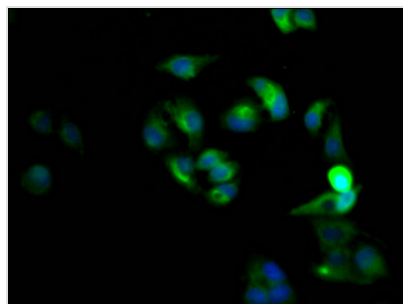




CXCR4 Recombinant Monoclonal Antibody

Product Code	CSB-RA569311A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P61073
Immunogen	A synthesized peptide derived from human CXCR4
Species Reactivity	Human
Tested Applications	ELISA, IF; Recommended dilution: IF:1:20-1:200
Relevance	Receptor for the C-X-C chemokine CXCL12/SDF-1 that transduces a signal by increasing intracellular calcium ion levels and enhancing MAPK1/MAPK3 activation. Acts as a receptor for extracellular ubiquitin; leading to enhanced intracellular calcium ions and reduced cellular cAMP levels. Involved in hematopoiesis and in cardiac ventricular septum formation. Also plays an essential role in vascularization of the gastrointestinal tract, probably by regulating vascular branching and/or remodeling processes in endothelial cells. Involved in cerebellar development. In the CNS, could mediate hippocampal-neuron survival.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Neuroscience; Cancer; Immunology; Metabolism; Microbiology; Stem cells
Gene Names	CXCR4
Clone No.	2F10

Image



Immunofluorescence staining of HeLa Cells with CSB-RA569311A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeated by 0.2% TritonX-100, and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).



Description

The CXCR4 recombinant monoclonal antibody is produced using recombinant DNA technology and is used for the detection of human CXCR4 protein in ELISA and IF applications. The production process begins by sequencing the cDNA of the CXCR4 antibody-producing hybridomas and synthesizing the gene that codes for the CXCR4 monoclonal antibody. The hybridomas are formed by fusing myeloma cells with B cells isolated from an animal that was immunized with a synthesized peptide derived from human CXCR4. The synthesized gene is then cloned into a vector and transfected into cells for cultivation. The resulting CXCR4 recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography.

The CXCR4 protein is primarily expressed on the surface of cells, including immune cells, stem cells, and cancer cells. When CXCL12 binds to CXCR4, it triggers a signaling cascade inside the cell that can lead to a variety of cellular responses that can promote the migration of cells toward areas where CXCL12 is present, such as sites of inflammation or injury. In addition to its role in cell migration, CXCR4 is also involved in cell survival, proliferation, and differentiation. CXCR4 signaling has been implicated in the development of various diseases, including cancer, HIV/AIDS, and inflammatory disorders.