

ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [SQab18123] recognizes CXCL12 / SDF1
Tested Reactivity	Hu
Tested Application	ELISA, FACS, ICC/IF, IHC-P, WB
Host	Mouse
Clonality	Monoclonal
Clone	SQab18123
Isotype	IgG2a, kappa
Target Name	CXCL12 / SDF1
Species	Human
Immunogen	Recombinant Human CXCL12 / SDF1 protein.
Conjugation	Un-conjugated
Alternate Names	TPAR1; SDF1; C-X-C motif chemokine 12; Pre-B cell growth-stimulating factor; TLSF; PBSF; SDF-1; Intercrine reduced in hepatomas; IRH; hSDF-1; 3-72; SCYB12; hIRH; 3-67; Stromal cell-derived factor 1

Application Instructions

Application table	Application	Dilution
	ELISA	1:3000 - 1:10000
	FACS	1:400 - 1:1000
	ICC/IF	1:400 - 1:1000
	IHC-P	Assay-dependent
	WB	1:2500 - 1:5000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties


Purification	Affinity purification with immunogen.
Buffer	PBS (pH 7.4) and 0.01% Thimerosal.
Preservative	0.01% Thimerosal
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Bioinformation

Gene Symbol	CXCL12
Gene Full Name	chemokine (C-X-C motif) ligand 12
Background	This antimicrobial gene encodes a stromal cell-derived alpha chemokine member of the intercrine family. The encoded protein functions as the ligand for the G-protein coupled receptor, chemokine (C-X-C motif) receptor 4, and plays a role in many diverse cellular functions, including embryogenesis, immune surveillance, inflammation response, tissue homeostasis, and tumor growth and metastasis. Mutations in this gene are associated with resistance to human immunodeficiency virus type 1 infections. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2014]
Function	Chemoattractant active on T-lymphocytes, monocytes, but not neutrophils. Activates the C-X-C chemokine receptor CXCR4 to induce a rapid and transient rise in the level of intracellular calcium ions and chemotaxis. Also binds to atypical chemokine receptor ACKR3, which activates the beta-arrestin pathway and acts as a scavenger receptor for SDF-1. SDF-1-beta(3-72) and SDF-1-alpha(3-67) show a reduced chemotactic activity. Binding to cell surface proteoglycans seems to inhibit formation of SDF-1-alpha(3-67) and thus to preserve activity on local sites. Acts as a positive regulator of monocyte migration and a negative regulator of monocyte adhesion via the LYN kinase. Stimulates migration of monocytes and T-lymphocytes through its receptors, CXCR4 and ACKR3, and decreases monocyte adherence to surfaces coated with ICAM-1, a ligand for beta-2 integrins. SDF1A/CXCR4 signaling axis inhibits beta-2 integrin LFA-1 mediated adhesion of monocytes to ICAM-1 through LYN kinase. Inhibits CXCR4-mediated infection by T-cell line-adapted HIV-1. Plays a protective role after myocardial infarction. Induces down-regulation and internalization of ACKR3 expressed in various cells. Has several critical functions during embryonic development; required for B-cell lymphopoiesis, myelopoiesis in bone marrow and heart ventricular septum formation. [UniProt]
Calculated Mw	11 kDa
PTM	Processed forms SDF-1-beta(3-72) and SDF-1-alpha(3-67) are produced after secretion by proteolytic cleavage of isoforms Beta and Alpha, respectively. The N-terminal processing is probably achieved by DPP4. Isoform Alpha is first cleaved at the C-terminus to yield a SDF-1-alpha(1-67) intermediate before being processed at the N-terminus. The C-terminal processing of isoform Alpha is reduced by binding to heparin and, probably, cell surface proteoglycans. [UniProt]
Cellular Localization	Secreted. [UniProt]

Images

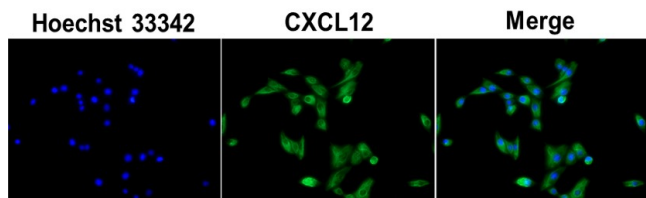
CXCL12



ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123] WB image

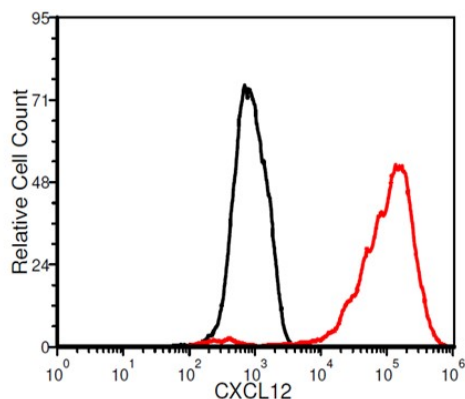
Western blot: HK2 stained with ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123].

From Zhou Y et al. Central European Journal of Immunology (2022), doi: 10.5114/ceji.2022.115628, Fig. 2. E.



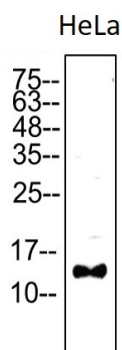
ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123] ICC/IF image

Immunofluorescence: A549 cells were fixed in 4% PFA, permeabilized with PBS containing 0.1% Triton X-100. Cells were stained with ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123] (green) at 1:200 dilution and cell nuclei were stained with Hoechst 33342 (blue).



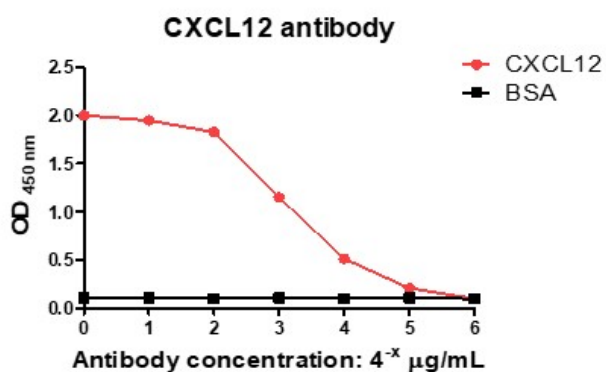
ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123] FACS image

Flow Cytometry: A549 cells were stained with ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123] at 2 µg/ml (red) and without antibody control (black).



ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123] WB image

Western blot: 30 µg of HeLa cell lysate stained with ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123] at 1:5000 dilution.



ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123] ELISA image

ELISA: Titration curve of ARG66421 anti-CXCL12 / SDF1 antibody [SQab18123]. Red: CXCL12; Black: BSA (negative control).