

## ARG82247 Human CXCL12 / SDF1 ELISA Kit

Package: 96 wells  
Store at: 4°C

### Summary

Product Description	ARG82247 Human CXCL12 / SDF1 ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human CXCL12 / SDF1 in serum, plasma and cell culture supernatants.
Tested Reactivity	Hu
Tested Application	ELISA
Specificity	The kit may react with Human SDF1 alpha and beta isoforms. Not react with following recombinant proteins: Human beta ECGF, GRO alpha, GRO beta, GRO gamma, MCP1, MIP1 alpha, MIP1 beta, PTN and RANTES. Mouse MIP1 alpha and MIP1 beta.
Target Name	CXCL12 / SDF1
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	31 pg/ml
Sample Type	Serum, plasma and cell culture supernatants.
Standard Range	62.5 - 4000 pg/ml
Sample Volume	100 µl
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

Assay Time	3.5 hours
------------	-----------

### Properties

Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

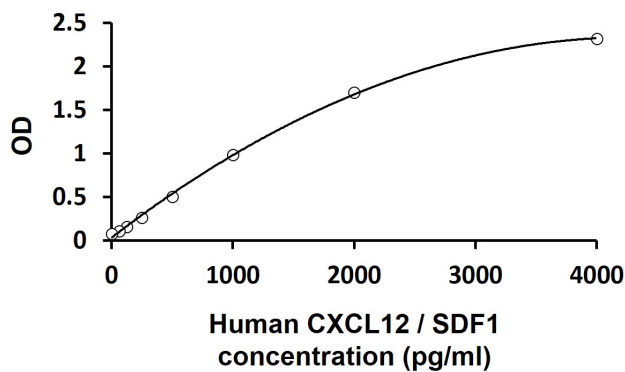
### Bioinformation

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	<p>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]</p>
Highlight	<p>Related products: <a href="#">CXCL12 antibodies</a>; <a href="#">CXCL12 ELISA Kits</a>; Related news: <a href="#">Detecting MMPs and their non-ECM substrates</a> New ELISA data calculation tool: <a href="#">Simplify the ELISA analysis by GainData</a></p>
PTM	<p>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]</p>
Cellular Localization	<p>Secreted. [UniProt]</p>

## Images



ARG82247 Human CXCL12 / SDF1 ELISA Kit standard curve image

ARG82247 Human CXCL12 / SDF1 ELISA Kit results of a typical standard run with optical density reading at 450 nm.