

Anti-CXCL12 / SDF1a Reference Antibody (Genentech anti-CXCL12)

Recombinant Antibody
Catalog # APR10871

Product Information

Application	FC, Kinetics, Animal Model
Primary Accession	P48061
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	10666

Additional Information

Target/Specificity	CXCL12 / SDF1a
Endotoxin Conjugation	Unconjugated
Expression system	CHO Cell
Format	Purified monoclonal antibody supplied in PBS, pH6.0, without preservative. This antibody is purified through a protein A column.

Protein Information

Name	CXCL12 {ECO:0000303 PubMed:16107333, ECO:0000312 HGNC:HGNC:10672}
Function	Chemoattractant active on T-lymphocytes and monocytes but not neutrophils (PubMed: 18802065 , PubMed: 39093700). Activates the C-X-C chemokine receptor CXCR4 to induce a rapid and transient rise in the level of intracellular calcium ions and chemotaxis (PubMed: 8752281 , PubMed: 18802065 , PubMed: 39093700). Also binds to atypical chemokine receptor ACKR3, which activates the beta-arrestin pathway and acts as a scavenger receptor for CXCL12/SDF-1 (PubMed: 16107333 , PubMed: 19255243). Binds to the allosteric site (site 2) of integrins and activates integrins ITGA4:ITGB3, ITGA4:ITGB1 and ITGA5:ITGB1 in a CXCR4-independent manner (PubMed: 29301984). Acts as a positive regulator of monocyte migration and a negative regulator of monocyte adhesion via the LYN kinase (PubMed: 18802065). 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 (PubMed: 16107333 , PubMed: 18802065 , PubMed: 19255243 , PubMed: 39093700). CXCR4 signaling axis inhibits beta-2 integrin LFA-1

mediated adhesion of monocytes to ICAM-1 through LYN kinase (PubMed:[18802065](#)). Inhibits CXCR4-mediated infection by T-cell line- adapted HIV-1 (PubMed:[8752281](#)). 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 (By similarity). Stimulates the proliferation of bone marrow-derived B-cell progenitors in the presence of IL7 as well as growth of stromal cell-dependent pre- B-cells (By similarity).

Cellular Location

Secreted

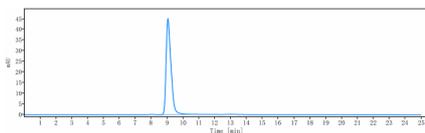
Tissue Location

Isoform Alpha and isoform Beta are ubiquitously expressed, with highest levels detected in liver, pancreas and spleen Isoform Gamma is mainly expressed in heart, with weak expression detected in several other tissues. Isoform Delta, isoform Epsilon and isoform Theta have highest expression levels in pancreas, with lower levels detected in heart, kidney, liver and spleen

Images



Anti-CXCL12 / SDF1a Reference Antibody (Genentech anti-CXCL12) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%



The purity of Anti-CXCL12 / SDF1a Reference Antibody (Genentech anti-CXCL12) is more than 95% ,determined by SEC-HPLC.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.