abcam

ab25117

# Anti-SDF1 antibody

Anti-SDF1 antibody (ab25117) is a rabbit polyclonal antibody detecting SDF1 in **Western Blot, Flow Cytometry, IP, IHC-P, IHC-Fr**. Suitable for **Mouse, Rat**.

- Over 60 publications
- Trusted since 2006

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 6.5 Preservative: 0.1% Sodium azide Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Polyclonal |
| **Immunogen** | Recombinant Fragment Protein within Mouse Cxcl12 aa 1-100. The exact immunogen used to generate this antibody is proprietary information. Database link P40224 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IP

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |

| | |
|---|---|
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt

### Expected

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | - |
| **Notes** | ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody. |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody. |

### Predicted

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/1000 |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Human, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IHC-FoFr

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## IHC-P

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## IHC-Fr

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |

| | |
|---|---|
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information Cxcl12

**Function**

Chemoattractant active on T-lymphocytes and monocytes but not neutrophils (By similarity). Activates the C-X-C chemokine receptor CXCR4 to induce a rapid and transient rise in the level of intracellular calcium ions and chemotaxis (By similarity). Also binds to atypical chemokine receptor ACKR3, which activates the beta-arrestin pathway and acts as a scavenger receptor for CXCL12/SDF-1 (By similarity). Binds to the allosteric site (site 2) of integrins and activates integrins ITGAV:ITGB3, ITGA4:ITGB1 and ITGA5:ITGB1 in a CXCR4-independent manner (By similarity). Acts as a positive regulator of monocyte migration and a negative regulator of monocyte adhesion via the LYN kinase (By similarity). 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 (By similarity). CXCR4 signaling axis inhibits beta-2 integrin LFA-1 mediated adhesion of monocytes to ICAM-1 through LYN kinase (By similarity). Plays a protective role after myocardial infarction (By similarity). Induces down-regulation and internalization of ACKR3 expressed in various cells (By similarity). Has several critical functions during embryonic development; required for B-cell lymphopoiesis, myelopoiesis in bone marrow and heart ventricular septum formation (PubMed:8757135). 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 (PubMed:8134392).

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |

| | |
|---|---|
| **Appropriate long-term storage conditions** | -20°C |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**What is this antibody validated in?**
Anti-SDF1 antibody (ab25117) is a rabbit polyclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunohistochemistry (IHC-Fr) in Mouse, Rat samples.

**What is the molecular weight of SDF1?**
Anti-SDF1 (ab25117) specifically detects a band for SDF1 (UniProt: P40224) at a molecular weight of 11kDa.

**Trusted by the scientific community**
Anti-SDF1 (ab25117) was first used in a scientific publication in 2006 and has been cited over 60 times in peer-reviewed journals.

**Reviewed by scientists**
Anti-SDF1 (ab25117) has over 5 independent reviews from customers.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | The stromal cell-derived factor 1 (SDF1) also known as C-X-C motif chemokine 12 (CXCL12) is a chemokine protein that is important in immunological responses and cellular signaling. This protein weighs approximately 8 kDa. SDF1 is largely expressed in bone marrow stroma liver and endothelium of various tissues positioning it as an integral player in cell migration and homing processes. The protein functions as a chemoattractant for lymphocytes promoting cellular trafficking and organ development. |
| **Biological function summary** | SDF1 influences the migration and survival of hematopoietic progenitor cells. It plays a pivotal role in heart development angiogenesis and neuronal protein regulation. SDF1 binds with high affinity to its receptor CXCR4 forming a critical signal transduction complex that modulates cellular movement and growth responses. This interaction is important in the regulation of cell positioning and potential pathways of pathological changes. |
| **Pathways** | SDF1 has an important role in the chemokine signaling pathway and is involved in the pathways controlling hematopoietic stem cell migration and homing. The interaction between SDF1 and CXCR4 triggers downstream signaling events engaging proteins like PI3K and MAPK which promote cell survival and proliferation. Furthermore the SDF1/CXCR4 axis is central to the vascular endothelial growth factor (VEGF) pathway facilitating angiogenesis and tissue repair mechanisms. |

| | |
|---|---|
| **Associated diseases and disorders** | SDF1 relates closely to cancer metastasis and HIV infection. The SDF1/CXCR4 interaction acts as a co-receptor for HIV entry into host cells implicating it in viral pathogenesis. Overexpression of SDF1 and its binding partner CXCR4 contributes to tumor growth invasion and metastasis in various cancers by promoting angiogenesis and tumor cell migration. The targeting of the SDF1/CXCR4 axis holds therapeutic potential in cancer treatment and infectious disease management. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

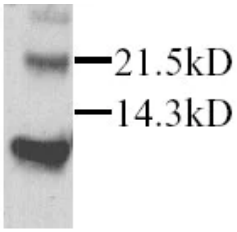
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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## 1 product image




## Western blot - Anti-SDF1 antibody (ab25117)

SDF1 Western blot staining of Recombinant mouse SDF1 alpha using rabbit Anti-SDF1 antibody

Detection of recombinant Mouse SDF1 alpha by Western Blot.
All lanes:
Western blot - Anti-SDF1 antibody (ab25117)

All lanes:
Recombinant mouse SDF1 alpha

Predicted band size: 10 kDa

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