

Datasheet: AHP794

**BATCH NUMBER 159892**

<b>Description:</b>	RABBIT ANTI HUMAN SDF-1 ALPHA
<b>Specificity:</b>	SDF-1 ALPHA
<b>Format:</b>	Purified
<b>Product Type:</b>	Polyclonal Antibody
<b>Isotype:</b>	Polyclonal IgG
<b>Quantity:</b>	0.1 mg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin (1)	▪			0.5ug/ml
ELISA	▪			0.5 - 2.0ug/ml
Immunoprecipitation			▪	
Western Blotting	▪			0.1 - 0.2ug/ml
Functional Assays	▪			2.0 - 4.0ug/ml

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

**(1)This product requires antigen retrieval using heat treatment prior to staining of paraffin sections.Sodium citrate buffer pH 6.0 is recommended for this purpose.**

### Target Species

Human

### Product Form

Purified IgG - lyophilised

### Reconstitution

Reconstitute with 0.1ml distilled water. For long term storage the addition of 0.09% sodium azide is recommended. NB: For functional studies do not add azide.

### Antiserum Preparation

Antisera to human SDF-1 $\alpha$  were raised by repeated immunisations of rabbits with highly purified antigen. Purified IgG prepared by affinity chromatography.

<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	None present
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml after reconstitution.
<b>Immunogen</b>	<a href="#">Recombinant human SDF-1<math>\alpha</math></a>
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P48061</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">6387</a>    CXCL12    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	SDF1, SDF1A, SDF1B
<b>RRID</b>	AB_844597
<b>Specificity</b>	<p><b>Rabbit anti Human SDF-1 alpha antibody</b> recognizes human SDF-1 alpha, otherwise known as CXCL12a, a 68 amino acid stromal cell derived CXC chemokine, which arises from alternative splicing of the SDF-1 gene. The two isoforms, SDF-1 alpha and SDF-1 beta, share an identical amino acid sequence, except for an additional four residues in the C-Terminal region of the beta isoform.</p> <p>SDF-1 binds with high-affinity to the G protein-coupled receptor CXCR4 (fusin) and acts as a chemoattractant for T and B lymphocytes, monocytes and migratory neurons, and is a vital factor in haematopoiesis and angiogenesis. By competitively binding to CXCR4, SDF-1 acts as an inhibitor for the CXCR4-mediated entry of HIV-1 virus into target T-cells, and the SDF-1-CXCR4 interaction is important for the regulation of trafficking of normal and malignant stem cells.</p>
<b>ELISA</b>	This purified human SDF-1 $\alpha$ antibody may be used in an indirect ELISA or as the capture reagent in a sandwich ELISA with our <a href="#">biotinylated human SDF-1<math>\alpha</math> antibody</a> (AHP794B) as the detection reagent and <a href="#">recombinant human SDF-1<math>\alpha</math></a> (PHP122) as the standard
<b>Histology Positive Control Tissue</b>	Human colorectal adenocarcinoma
<b>Western Blotting</b>	This antibody may be used in Western Blotting under either reducing or non-reducing conditions with <a href="#">recombinant human SDF-1<math>\alpha</math></a> (PHP122) as the positive control.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Wuchter, P. <i>et al.</i> (2016) Microcavity arrays as an <i>in vitro</i> model system of the bone marrow niche for hematopoietic stem cells. <a href="#">Cell Tissue Res. 364 (3): 573-84.</a></li> <li>2. Song, J. <i>et al.</i> (2015) Focal MMP-2 and MMP-9 activity at the blood-brain barrier</li> </ol>

promotes chemokine-induced leukocyte migration. [Cell Rep. 10 \(7\): 1040-54.](#)

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- Further Reading**
1. Nagasawa, T. *et al.* (1998) A novel CXC chemokine PBSF/SDF-1 and its receptor CXCR4: their functions in development, hematopoiesis and HIV infection. [Semin Immunol. 10 \(3\): 179-85.](#)
  2. Stumm, R. & Höllt, V. (2007) CXC chemokine receptor 4 regulates neuronal migration and axonal pathfinding in the developing nervous system: implications for neuronal regeneration in the adult brain. [J Mol Endocrinol. 38 \(3\): 377-82.](#)
  3. Kucia, M. *et al.* (2005) Trafficking of normal stem cells and metastasis of cancer stem cells involve similar mechanisms: pivotal role of the SDF-1-CXCR4 axis. [Stem Cells. 23 \(7\): 879-94.](#)

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**Storage**

Prior to reconstitution store at -20°C.  
After reconstitution store at -20°C.

This product should be stored undiluted. Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Guarantee** 6 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10162 available at: <https://www.bio-rad-antibodies.com/SDS/AHP794>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

- Sheep Anti Rabbit IgG (STAR34...) [FITC](#)  
Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)  
Sheep Anti Rabbit IgG (STAR35...) [RPE](#)  
Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)

### Recommended Positive Controls

[RECOMBINANT HUMAN SDF-1 ALPHA \(PHP122\)](#)

### Recommended Useful Reagents

[RABBIT ANTI HUMAN SDF-1 ALPHA:Biotin \(AHP794B\)](#)  
[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)  
[TidyBlot WESTERN BLOT DETECTION REAGENT:HRP \(STAR209P\)](#)

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