

## Datasheet: AHP794

<b>Description:</b>	RABBIT ANTI HUMAN SDF-1 ALPHA
<b>Specificity:</b>	SDF-1 ALPHA
<b>Other names:</b>	CXCL12a
<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.**

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - lyophilised
<b>Reconstitution</b>	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.
<b>Antiserum Preparation</b>	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 promotes chemokine-induced leukocyte migration. <a href="#">Cell Rep. 10 (7): 1040-54.</a></li> </ol>
<b>Further Reading</b>	<ol style="list-style-type: none"> <li>1. Nagasawa, T. <i>et al.</i> (1998) A novel CXC chemokine PBSF/SDF-1 and its receptor CXCR4: their functions in development, hematopoiesis and HIV infection. <a href="#">Semin Immunol. 10 (3): 179-85.</a></li> <li>2. Stumm, R. &amp; 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. <a href="#">J Mol Endocrinol. 38 (3): 377-82.</a></li> <li>3. Kucia, M. <i>et al.</i> (2005) Trafficking of normal stem cells and metastasis of cancer stem cells involve similar mechanisms: pivotal role of the SDF-1-CXCR4 axis. <a href="#">Stem Cells. 23 (7): 879-94.</a></li> </ol>
<b>Storage</b>	<p>Prior to reconstitution store at -20°C.</p> <p>After reconstitution store at -20°C.</p>

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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<b>Guarantee</b>	6 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10162 available at: 10162: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf</a>
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<b>Regulatory</b>	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](#)  
Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)  
Sheep Anti Rabbit IgG (STAR35...) [RPE](#)  
Sheep Anti Rabbit IgG (STAR36...) [DyLight@488](#), [DyLight@680](#), [DyLight@800](#)

### 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 \(BUF025A\)](#)  
[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025C\)](#)  
[TidyBlot WESTERN BLOT DETECTION REAGENT:HRP \(STAR209P\)](#)

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