

Datasheet: AHP794

BATCH NUMBER 163899

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| Description: | RABBIT ANTI HUMAN SDF-1 ALPHA |
| Specificity: | SDF-1 ALPHA |
| Format: | Purified |
| Product Type: | Polyclonal Antibody |
| Isotype: | Polyclonal IgG |
| Quantity: | 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.

| | 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 - lyophilized

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 α were raised by repeated immunisations of rabbits with highly purified antigen. Purified IgG prepared by affinity chromatography.

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| Buffer Solution | Phosphate buffered saline |
| Preservative Stabilisers | None present |
| Carrier Free | Yes |
| Approx. Protein Concentrations | IgG concentration 1.0 mg/ml after reconstitution. |
| Immunogen | Recombinant human SDF-1α |
| External Database Links | <p>UniProt: P48061 Related reagents</p> <p>Entrez Gene: 6387 CXCL12 Related reagents</p> |
| Synonyms | SDF1, SDF1A, SDF1B |
| RRID | AB_844597 |
| Specificity | <p>Rabbit anti Human SDF-1 alpha antibody 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> |
| ELISA | This purified human SDF-1 α antibody may be used in an indirect ELISA or as the capture reagent in a sandwich ELISA with our biotinylated human SDF-1α antibody (AHP794B) as the detection reagent and recombinant human SDF-1α (PHP122) as the standard |
| Histology Positive Control Tissue | Human colorectal adenocarcinoma |
| Western Blotting | This antibody may be used in Western Blotting under either reducing or non-reducing conditions with recombinant human SDF-1α (PHP122) as the positive control. |
| References | <ol style="list-style-type: none"> 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. Cell Tissue Res. 364 (3): 573-84. 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. [Cell Rep. 10 \(7\): 1040-54.](#)

- 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.](#)

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.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10294 available at: <https://www.bio-rad-antibodies.com/SDS/AHP794>
10294

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

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