Recombinant Canine CXCL12/SDF-1 Protein

Catalog No.: RP03263

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Sequence Information

Species	Gene ID
Canine	449622
Swiss Prot	**Tags**
Q3LSL4	No tag

Synonyms

Stromal cell-derived factor 1; SDF-1; C-X-C motif chemokine 12; CXCL12

Product Information

Source	Purification
E.coli	≥ 95 % as determined by SDS-PAGE.
Calculated MW	**Observed MW**
8.6 kDa	10-14 kDa

Endotoxin

Please contact us for more information.

Formulation

Lyophilized from a 0.22 μm filtered solution of 50 mM Tris, 500 mM NaCl, pH 8.0. Contact us for customized product form or formulation.

Reconstitution

Please contact us for reconstitution instructions.

Background

The human stromal cell-derived factor-1 (SDF1), also known as CXCL12, is a small (8 kDa) cytokine highly conserved chemotactic cytokine belonging to the large family of CXC chemokines. SDF1 is expressed in two isoforms from a single gene that encodes two splice variants, SDF1α and SDF1β, which are identical except for the four residues present in the C-terminus of SDF1β but absent from SDF1α. The chemokine CXCL12 [stromal cell-derived factor-1 (SDF-1)] binds primarily to CXC receptor 4 (CXCR4; CD184). The binding of CXCL12 to CXCR4 induces intracellular signaling through several divergent pathways initiating signals related to chemotaxis, cell survival and/or proliferation, increase in intracellular calcium, and gene transcription. CXCL12 and CXCR4 that have been widely characterized in peripheral tissues and delineate their main functions in the CNS. Extensive evidence supports CXCL12 as a key regulator for early development of the CNS. In the mature CNS, CXCL12 modulates neurotransmission, neurotoxicity and neuroglial interactions. CXCL12 has crucial roles in the formation of multiple organ systems during embryogenesis and in the regulation of bone marrow haematopoiesis and immune function in the postnatal organism. Although considered an important factor in normal bone metabolism, recent studies implicate CXCL12 in the pathogenesis of several diseases involving the skeleton, including rheumatoid arthritis and cancers that metastasize to bone. The CXCL12/CXCR4 axis is involved in tumor progression, angiogenesis, metastasis, and survival. Pathologically enhanced CXCL12 signaling may promote the formation of new vessels through recruiting circulating endothelial progenitor cells or directly enhancing the migration/growth of endothelial cells. Therefore, CXCL12 signaling represents an important mechanism that regulates brain tumor angiogenesis/vasculogenesis and may provide potential targets for anti-angiogenic therapy in malignant gliomas.

Basic Information

Description

Recombinant Canine CXCL12/SDF-1 Protein is produced by *E. coli* expression system. The target protein is expressed with sequence(Lys22-Met93) of Canine CXCL12/SDF-1 (Accession #NP_001121569.1) fused with No tag.

Activity

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20℃

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

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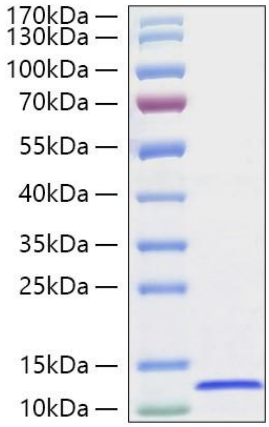
For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.

Validation Data



Recombinant Canine CXCL12/SDF-1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.