BCA-1/ BLC (CXCL13), human recombinant (rHuBCA-1)

Catalog No: 97377
Lot No: XXXXX
Source: *E. coli*
Synonyms: C-X-C motif chemokine 13, Small-inducible cytokine B13, B lymphocyte chemoattractant, CXC chemokine BLC, CXCL13, BCA1, BCA-1, CXCL-13, B cell Attracting Chemokine-1, BLC, ANGIE, BLR1L, SCYB13, ANGIE2

Background

BCA-1 is a CXC chemokine that is highly expressed in thesecondary lymphoid organs, such as follicles of the spleen, lymph nodes, and Peyer's patches. CXCL13 promotes the migration of B lymphocytes (compared to T cells and macrophages), by stimulating calcium influx into, and chemotaxis of, cells expressing Burkitt's lymphoma receptor 1 (BLR1). BCA1 therefore function in the homing of B lymphocytes to follicles. Human BCA-1 shares a 64% amino acid sequence similarity with the mouse protein and 23 - 34% amino acid sequence identity with other known CXC chemokines. Recombinant or chemically synthesized BCA1 is a potent chemoattractant for B lymphocytes but not T lymphocytes, monocytes or neutrophils. BLR1, a G protein-coupled receptor originally isolated from Burkitt's lymphoma cells, has now been shown to be the specific receptor for BCA1. Among cells of the hematopoietic lineages, the expression of BLR-1, now designated CXCR-5, is restricted to B lymphocytes and a subpopulation of T helper memory cells.

Description

CXCL13 human recombinant produced in *E. coli* is a single,non-glycosylated, polypeptide chain containing 87 amino acids and having a molecular mass of 10.3 kDa. BCA-1 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The BCA-1 protein was lyophilized from a concentrated (0.5 mg/ml) solution containing 20 mM PBS and 150 mM NaCl pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized CXCL13 in sterile 18 MΩ-cm H_2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized BCA1, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BCA1 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

VLEVYYTSLR CRCVQESSVF IPRRFIDRIQ ILPRGNGCPR KEIIVWKKNK SIVCVDPQAE WIQRMMEVLR KRSSSTLPVP VFKRKIP

Activity

Determined by its ability to chemoattract human B cells using a concentration range of 1 - 10 ng/ml corresponding to a specific activity of 100,000 - 1,000,000 IU/mg.

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.