Data Sheet (Cat.No.TMPY-03708)

TargetMol

CXCL13/BCA-1 Protein, Canine, Recombinant (His)

General Information

Synonyms:	chemokine (C-X-C motif) ligand 13
Protein Construction:	A DNA sequence encoding the canine CXCL13 (XP_851619.3) (Val23-Asn110) was expressed with a N-terminal polyhistidine tag. Predicted N terminal: His
Species:	Canine
Expression Host:	E. coli
Accession:	XP_851619.3
Molecular Weight:	12.1 kDa (predicted); 15 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The chemokine CXCL13, also known as BCA-1 (B-cell-attracting chemokine-1) or BLC (B-lymphocyte chemoattractant), which belongs to the CXC chemokine family. CXCL13 and its receptor CXCR5 control the organization of B cells within follicles of lymphoid tissues. CXCL13 is known to dictate homing and motility of B cells in lymphoid tissue and has been implicated in the formation of ectopic lymphoid tissue in chronic inflammation. It involves in B-cell compartmental homing within secondary lymphoid organs and recently

implicated in the pathogenesis of inflammatory and malignant lymphocyte-mediated diseases. In Primary central nervous system lymphoma (PCNSL), expression of BCA-1 by malignant lymphocytes and vascular endothelium may influence tumor development and localization to central nervous system (CNS). In T-lymphocytes, CXCL13 expression is thought to reflect a germinal center origin of the T-cell. CXCL13 expression may also provide an additional useful tool for the diagnosis of Angioimmunoblastic T-cell lymphoma (AITL).

Reference

Ansel KM, et al. (2000) A chemokine-driven positive feedback loop organizes lymphoid follicles. Nature. 406 (6793): 309-14.

Smith JR, et al. (2003) Expression of B-cell-attracting chemokine 1 (CXCL13) by malignant lymphocytes and vascular endothelium in primary central nervous system lymphoma. Blood. 101(3): 815-21.

Dupuis J, et al. (2006) Expression of CXCL13 by neoplastic cells in angioimmunoblastic T-cell lymphoma (AITL): a new diagnostic marker providing evidence that AITL derives from follicular helper T cells. Am J Surg Pathol. 30(4): 490-4.

de Leval L, et al. (2007) The gene expression profile of nodal peripheral T-cell lymphoma demonstrates a molecular link between angioimmunoblastic T-cell lymphoma (AITL) and follicular helper T (TFH) cells. Blood. 109 (11): 4952-63.

Schiffer L, et al. (2009) B-cell-attracting chemokine CXCL13 as a marker of disease activity and renal involvement in systemic lupus erythematosus (SLE). Nephrol Dial Transplant. 24(12): 3708-12.

Rupprecht TA, et al. (2009) The chemokine CXCL13 is a key regulator of B cell recruitment to the cerebrospinal fluid in acute Lyme neuroborreliosis. J Neuroinflammation. 6: 42.