Canine XCL1 Protein (His Tag)

Catalog Number: **70096-D08B**

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Biological Solution Specialist

General Information

Gene Name Synonym:

XCL1

Protein Construction:

A DNA sequence encoding the canine XCL1 (XP_547477.2) (Met1-Thr112) was expressed with a C-terminal polyhistidine tag.

Source: Canine

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Glu 25

Molecular Mass:

The recombinant canine XCL1 comprises 98 amino acids and has a predicted molecular mass of 11.3 kDa. The apparent molecular mass of the protein is approximately 18-23 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% glycerol, pH 7.4.

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

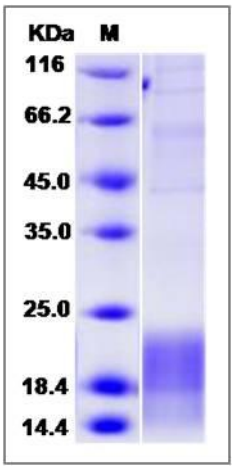
Usage Guide

Storage:

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Chemokine (C motif) ligand (XCL1) is a member of the C-chemokine subfamily of XC chemokine family that is also known as lymphotactin. Chemokines are the largest family of cytokines, cause leukocyte mobilization through chemotaxis at sites of antigenic challenge or lesions. XCL1 is maily expressed in high levels in spleen, thymus, intestine and peripheral blood leukocytes, and lower levels in lung, prostate gland and ovary. XCL1 differs from other chemokines in that it contains only a single disulfide bond and a mucin-like domain at its carboxy terminus that is glycosylated. Lymphotactin-XCL1 is a chemokine produced mainly by activated CD8+ T-cells and directs migration of CD4+ and CD8+ lymphocytes and natural killer (NK) cells. This chemokine attracts T cells. Experiments showed a reduction in XCL1 and XCR1 expression in allergic asthma regulatory T cell compared with healthy control and nonallergic asthmatic counterparts. This reduction in XCL1 expression was associated with the suboptimal regulatory function of regulatory T cell (Treg) in allergic asthma. Interestingly, incubation with recombinant human XCL1 significantly increased Treg-mediated suppression and cytotoxicity by up-regulating expression of XCL1 and chief effector molecules of Treg function. Altogether, these results suggest an association between dysregulated XCL1 expression and reduced Treg activities in AA, as well as a potential role of XCL1 in reversing defective Treg function in the disease.

References

1. Nguyen KD. et al., 2008, J Immunol. 181 (8): 5386-95.
2. Dong C. et al., 2005, J Immunol Methods. 302 (1-2): 136-44.
3. Zavala-Flores LM. et al., 2009, Biotechnol Lett. 31 (2): 215-20.