

IL-17 Protein, Canine, Recombinant

General Information

Synonyms:	interleukin 17A
Protein Construction:	A DNA sequence encoding the canine IL17A (NP_001159350.1)(Gly26-Ala155) was expressed with a N-terminal Met. Predicted N terminal: Met
Species:	Canine
Expression Host:	E. coli
Accession:	C6L8D7
Molecular Weight:	15.2 kDa (predicted); 15 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	<ol style="list-style-type: none">1. Measured by its binding ability in a functional ELISA. Immobilized Canine IL17A at 10 µg/ml (100 µl/well) can bind human IL17Ra, The EC50 of human IL17Ra is 6.0-15.0 ng/ml.2. Measured by its ability to induce IL-6 secretion by HFF human foreskin fibroblast cells. The ED50 for this effect is typically 1-5 ng/mL.
Purity:	> 90 % 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

IL17, also known as IL17a, is a cytokine that belongs to the IL-17 family. Cytokines are proteinaceous signaling compounds that are major mediators of the immune response. They control many different cellular functions including proliferation, differentiation, and cell survival/apoptosis but are also involved in several

pathophysiological processes including viral infections and autoimmune diseases. Cytokines are synthesized under various stimuli by a variety of cells of both the innate (monocytes, macrophages, dendritic cells) and adaptive (T- and B-cells) immune systems. The IL-17 family of cytokines includes six members, IL-17/IL-17A, IL-17B, IL-17C, IL-17D, IL-17E/IL-25, and IL-17F, which are produced by multiple cell types. IL-17 regulates the activities of NF-kappaB and mitogen-activated protein kinases. This cytokine can stimulate the expression of IL6 and cyclooxygenase-2 (PTGS2/COX-2), as well as enhance the production of nitric oxide (NO). High levels of IL-17 are associated with several chronic inflammatory diseases including rheumatoid arthritis, psoriasis, and multiple sclerosis. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

Reference

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- Laan M, et al. (1999) Neutrophil recruitment by human IL-17 via C-X-C chemokine release in the airways. *J Immunol.* 162(4):2347-52.
- Shin HC, et al. (1999) Regulation of IL-17, IFN-gamma and IL-10 in human CD8(+) T cells by cyclic AMP-dependent signal transduction pathway. *Cytokine.* 10(11):841-50.

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