

IL-33 Protein, Canine, Recombinant

General Information

Synonyms:	interleukin 33
Protein Construction:	A DNA sequence encoding the mature form of canine IL33 (O97863) (Ser 110-Ser 263) was expressed, with an initial Met at the N-terminus. Predicted N terminal: Met
Species:	Canine
Expression Host:	E. coli
Accession:	O97863
Molecular Weight:	17.8 kDa (predicted); 19 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized Canine IL33 at 10 µg/ml (100 µl/well) can bind human IL1R4-Fc, The EC50 of human IL1R4-Fc is 0.25-0.66 µg/ml.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH7.4. 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:
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

Interleukin 33 (IL-33), also known as DVS27 or NF-HEV (Nuclear Factor from High Endothelial Venules), is a pro-inflammatory protein and a chromatin-associated cytokine of the IL-1 family with high sequence and structural similarity to IL-1 and IL-18. IL-33 protein is expressed highly and rather selectively by high endothelial venule endothelial cells (HEVECs) in human tonsils, Peyer's patches, and lymph nodes. IL-33 protein has transcriptional regulatory properties, and the researches suggested that IL-33 is a dual-function protein that might act both as a

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cytokine and as an intracellular nuclear factor. As a type 2 cytokines, IL-33 protein also play a pivotal role in helminthic infection and allergic disorders.

Reference

likura M, et al. (2007) IL-33 can promote survival, adhesion and cytokine production in human mast cells. Lab Invest. 87(10): 971-8.

Lamkanfi M, et al. (2009) IL-33 raises alarm. Immunity. 31(1): 5-7.

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