

Active Recombinant Canine IL4 Protein (His25-His132)

Cat. No. IL4-921C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Canine IL4 Protein (O77762) (His25-His132) was produced by E. coli expression system. This protein was expressed, with an initial Met at the N-terminus.
Species	Canine
Source	E.coli
ProteinLength	His25-His132
Description	Interleukin-4, also known as IL4, is a secreted protein which belongs to the IL-4 / IL-13 family. Interleukin-4 / IL4 has many biological roles, including the stimulation of activated B-cell and T-cell proliferation. It enhances both secretion and cell surface expression of IgE and IgG1. Interleukin-4 / IL4 also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. Interleukin-4 is essential for the switching of B cells to IgE antibody production and for the maturation of T helper (Th) cells toward the Th2 phenotype. It participates in at least several B-cell activation processes as well as of other cell types. However, studies show that double mutant (Q116D, Y119D) of the murine IL4 protein (QY), both glutamine 116 and tyrosine 119, which binds to the IL4 receptor alpha, completely inhibites in a dose-dependent manner the IL4-induced proliferation of lipopolysaccharide-stimulated murine splenic B-cells, of the murine T cell line CTLL-2, and of the murine pre-B-cell line BA/F3. QY also inhibited the IL4-stimulated up-regulation of CD23 expression by lipopolysaccharide-stimulated murine splenic B-cells and abolished tyrosine phosphorylation of the transcription factor Stat6 and the

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	tyrosine kinase Jak3 in IL4-stimulated BA/F3 cells.
Predicted N Terminal	Met
Form	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Bio-activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is typically 5-30 ng/ml.
Molecular Mass	The recombinant canine IL4 consists of 109 amino acids and has a calculated molecular mass of 13 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12-14 KDa band.
Purity	> 96 % as determined by SDS-PAGE
Stability	Samples are stable for up to twelve months from date of receipt at -70 centigrade.
Storage	Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 mg/ml. Centrifuge the vial at 4°C before opening to recover the entire contents.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

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