

# Recombinant Full Length Feline IL10 Protein, Tag Free

**Cat. No.** IL10-01F    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Product Overview</b> | Feline IL-10 (Interleukin-10) is a yeast-derived cytokine supplied lyophilized without carrier protein in 10% trehalose, it contains no affinity tags, is naturally endotoxin-free, with 100% amino-acid homology to domestic cat, cheetah, Canada lynx, lion, leopard, snow leopard, fishing cat, and jaguarundi. It includes a single substitution ([Arg107His]) to remove a cleavage site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Species</b>          | Feline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Source</b>           | Yeast                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ProteinLength</b>    | 1-178 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Description</b>      | Feline Interleukin-10 (IL-10) is a potent anti-inflammatory cytokine produced primarily by regulatory T cells (Tregs), Th2 cells, macrophages, dendritic cells, and certain B-cell subsets in cats ( <i>Felis catus</i> ), where it plays a central role in limiting excessive immune activation and maintaining immune homeostasis. IL-10 signals through the IL-10 receptor complex (IL-10R1/IL-10R2), activating JAK/STAT3 pathways that suppress pro-inflammatory cytokine production (including IL-1 $\beta$ , TNF- $\alpha$ , and IL-6), inhibit antigen presentation, and downregulate Th1-type immune responses. In feline health, IL-10 is critically involved in modulating immune responses during chronic viral infections such as feline immunodeficiency virus (FIV), feline leukemia virus (FeLV), and feline infectious peritonitis (FIP), where elevated IL-10 expression can contribute to immune suppression and viral persistence. IL-10 is also associated with chronic inflammatory conditions such as gingivostomatitis and inflammatory bowel disease, |

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where it may play dual roles in controlling inflammation while potentially limiting effective pathogen clearance. As both a biomarker of immune regulation and a functional mediator of anti-inflammatory pathways, feline IL-10 is important in vaccine studies, immunopathogenesis research, and therapeutic modulation of immune responses. In translational research, cats serve as valuable natural models for human retroviral infection (FIV as a model for HIV), coronavirus-associated immunopathology (FIP), and chronic inflammatory diseases, and characterization of feline IL-10 supports comparative studies of immune regulation, tolerance, and cytokine network balance relevant to both veterinary and human medicine.

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| <b>Molecular Mass</b> | 18.7 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>AASequence</b>     | SRHQSTLSEDNCTHFSVSLPHMLRELRAAFGKVKTFQTKDELHSILLTRSLLEDFK<br>GYLGCQALSEMIQFYLEEVMQAENEDPDIKQHVNSLGEKCLKTLRLRLRHCHRFLLPC<br>ENKSKVVEQVKSTFSKLQEKG VYKAMGEFDIFINYIEAYMTMKMKI(160)[Arg107His]                                                                                                                                                                                                                                                                                   |
| <b>Endotoxin</b>      | Endotoxin-free                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Purity</b>         | > 98% as visualized by SDS-PAGE analysis.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Applications</b>   | Cell Culture, ELISA Standard, ELISpot Control, Western Blot Control It is commonly used to study IL-10 signaling and immune regulation, particularly anti-inflammatory responses, cytokine suppression, and regulation of innate and adaptive immunity; typical applications include cell-based assays, cytokine signaling studies, immunology research, ELISA and neutralization assays, flow cytometry and Western blot controls, and antibody development or validation. |
| <b>Storage</b>        | At -20 centigrade. It is stable for up to twelve months at -20 centigrade from receipt, with working aliquots (with carrier protein) stable for ~3 months; avoid repeated freeze/thaw cycles.                                                                                                                                                                                                                                                                               |

**Reconstitution** In sterile PBS with at least 0.1% carrier protein.

## GENE INFORMATION

**Gene Name** IL10 interleukin 10 [ Felis catus (domestic cat) ]

**Official Symbol** IL10

**Synonyms** IL10; interleukin 10; interleukin-10; CSIF; IL-10; cytokine synthesis inhibitory factor

**Gene ID** 493683

**mRNA Refseq** NM\_001009209

**Protein Refseq** NP\_001009209

**UniProt ID** P55029

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