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IL-15

Catalog # PVGS1502

Specification

IL-15 - Product Information

Primary Accession P40933

Species
Human

Sequence
Asn49-Ser162, expressed with an N-terminal Met

Purity
> 95% as analyzed by SDS-PAGE

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Biological Activity
ED₅₀ < 0.5 ng/ml, determined by the dose-dependent stimulation of the proliferation of CTLL-2 cells, corresponding to a specific activity of > 2.0 × 10⁶ units/mg.

Expression System
E. coli

Formulation **Lyophilized after extensive dialysis against PBS.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 µg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

IL-15 - Additional Information

Gene ID 3600

Other Names
Interleukin-15, IL-15, IL15

Target Background
Interleukin-15 (IL-15) is a cytokine with structural similarity to IL-2. Like IL-2, IL-15 binds to and signals through a complex composed of IL-2/IL-15 receptor beta chain (CD122) and the common gamma chain (gamma-C, CD132). IL-15 is secreted by mononuclear phagocytes (among other

cells) following infection by virus. This cytokine induces cell proliferation of natural killer cells, which are cells of the innate immune system whose principal role is to kill virally infected cells. IL-15 can stimulate the proliferation of T-lymphocytes. Stimulation by IL-15 occurs following its interaction with IL-15Rα. This interaction may enhance IL-15’s interaction with IL15Rβγc.

IL-15 - Protein Information

Name IL15

Function
Cytokine that plays a major role in the development of inflammatory and protective immune responses to microbial invaders and parasites by modulating immune cells of both the innate and adaptive immune systems (PubMed:15123770). Stimulates the proliferation of natural killer cells, T-cells and B-cells and promotes the secretion of several cytokines (PubMed:8178155, PubMed:9326248). In monocytes, induces the production of IL8 and monocyte chemotactic protein 1/CCL2, two chemokines that attract neutrophils and monocytes respectively to sites of infection (PubMed:9326248). Unlike most cytokines, which are secreted in soluble form, IL15 is expressed in association with its high affinity IL15RA on the surface of IL15-producing cells and delivers signals to target cells that express IL2RB and IL2RG receptor subunits (PubMed:10233906, PubMed:23104097, PubMed:8026467). Binding to its receptor triggers the phosphorylation of JAK1 and JAK3 and the recruitment and subsequent phosphorylation of signal transducer and activator of transcription-3/STAT3 and STAT5 (PubMed:7568001). In mast cells, induces the rapid tyrosine phosphorylation of STAT6 and thereby controls mast cell survival and release of cytokines such as IL4 (By similarity).

Cellular Location
[Isoform IL15-S48AA]: Secreted.

Tissue Location
Most abundant in placenta and skeletal muscle. It is also detected in the heart, lung, liver and kidney. IL15-S21AA is preferentially expressed in tissues such as testis and thymus

IL-15 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

IL-15 - Images