Recombinant Human Interleukin 18

Catalog Number	Size
AG117-25	25μg
AG117-B	Bulk

Specifications and Use

Description Recombinant human IL-18 produced in Yeast is a single polypeptide chain containing 157 amino acids, and having a predicted molecular mass of approximately 18.0kDa.

Source *Yeast*

Molecular Mass Approximately 18.0kDa.

Purity ≥97%, as determined by SDS-PAGE and HPLC method.

Endotoxin Level ≤1EU/μg, determined by the LAL method.

Biological Activity Induction of IFN-γ by PBMC cell in response to the recombinant human IL-18 was measured using human IFN-γ ELISA. IFN-γ producing activity of the sample cells can be varied depending on cell conditions. Optimal concentration for each application should be determined by each laboratory.

Formulation Lyophilized from a 0.2μm filtered solution in 50mM NaAc, 2mM DTT and 1% sucrose, pH5.5.

Reconstitution It is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of not less than 100μg/ml of the cytokine.

Storage Lyophilized samples are stable for greater than six months from date of receipt at -20°C to -70°C.
The reconstituted samples can be stored under sterile conditions at 2- 8°C for one month or at -20°C to -70°C for three months without detectable loss of activity.
Avoid repeated freeze-thaw cycles.

Human Interleukin 18

Interleukin 18 (IL-18) is a cytokine which identified as a costimulatory factor for production of interferon-γ (IFN-γ) in response to toxic shock and shares functional similarities with IL-12. IL-18 is synthesized as a precursor 24-kDa molecule without a signal peptide and must be cleaved to produce an active molecule. IL-1 converting enzyme (ICE, Caspase-1) cleaves pro-IL-18 at aspartic acid in the P1 position, producing the mature, bioactive peptide that is readily released from the cells. It is reported that IL-18 is produced from Kupffer cells, activated macrophages, keratinocytes, intestinal epithelial cells, osteoblasts, adrenal cortex cells and murine diencephalon. IFN-γ is produced by activated T or NK cells and plays critical roles in the defense against microbiral pathogens. IFN-γ activates macrophages and enhances NK activity and B cell maturation, proliferation and Ig secretion. IFN-γ also induces expression of MHC class I and II antigens and inhibits osteoclast activation. IL-18 acts on T helper type-1 (Th1) T cells and in combination with IL-12 strongly induces them to produce IFN-γ . Pleiotropic effects of IL-18 have also been reported, such as, enhancement production of IFN-γ and GM-CSF in peripheral blood mononuclear cells, production of Th1 cytokines, IL-2, GM-CSF and IFN-γ in T cells, enhancement of Fas ligand expression by Th1 cells.

FOR RESEARCH USE ONLY