ISOkine
PREMIUM GRADE GROWTH FACTORS AND CYTOKINES

Animal-Free | Endotoxin-Free | Carrier-Free

IFN-gamma, human, recombinant

Catalog Number: IK2000

DESCRIPTION
Interferon gamma (IFN-gamma) is a type II, acid-labile interferon mainly produced by activated CD4 and CD8 T-lymphocytes and natural killer cells. IFN-gamma shows no significant homology with IFN-alpha or IFN-beta. It has antiviral, antiparasitic, immunoregulatory, and proinflammatory activities. IFN-gamma induces cytokine production and promotes antigen presentation by upregulating MHC and other antigen proteins. Unlike other interferons, which are primarily antiviral, IFN-gamma is mainly immunomodulatory. Human IFN-gamma is species-specific and biologically active only in humans and primates.

SOURCE
Produced in the endosperm tissue of barley grain (*Hordeum vulgare*). ISOkine® growth factors and cytokines are animal-free and serum-free and void of antibiotics, endotoxins, viruses, and prions.

FORMULATION
2xPBS pH 7.2, sterile filtered through 0.22 µm filter.

PURITY
> 95% by SDS-PAGE gel analysis.

SHELF LIFE
The lyophilized protein has a shelf life for 3 years when stored at < 20°C.

RECONSTITUTION
Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile buffered saline to a concentration of no less than 100 µg/ml. For long term storage of the reconstituted solution, it is recommended to add a carrier protein (0.1% HSA or BSA).

STABILITY
The lyophilized protein, though stable at room temperature for a few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

BIOLOGICAL ACTIVITY
Each batch of ISOkine® growth factors is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of ISOkine® recombinant human IFN-gamma is assayed by measuring its dose-dependent effect on the proliferation of HT-29 (human carcinoma) cells. The ED50 for this effect using IFN-gamma is typically <0.4 ng/ml. Optimal concentration should be determined for specific applications and cell lines.

ENDOTOXIN LEVEL
Endotoxin level is < 0.0100 EU per µg of ISOkine® product by LAL method.

MAT ASSAY
Purified ISOkine® product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction.
(Ref. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland.)

MOLECULAR WEIGHT
Recombinant human IFN-gamma contains 143 amino acids and an N-terminal 6 amino acid histidine tag for a total length of 149 amino acids and has a predicted molecular mass of 17.57 kDa.

not for human use | for research use only

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