ISOkine

DATA SHEET

GM-CSF, human, recombinant

Catalog Number: IK1900 **Available sizes:** 10 µg, 50 µg, 100 µg

DESCRIPTION
Granulocyte macrophage colony-stimulating factor (GM-CSF) is a hematopoietic growth factor produced by various cell types such as T and B cells, macrophages, endothelial cells and fibroblasts, in response to cytokine or inflammatory stimuli. GM-CSF stimulates the development of granulocytes and macrophages, and the proliferation and development of erythroid, megakaryocyte and eosinophil progenitors. It also enhances functional activity of mature hematopoietic cells. GM-CSF is of great clinical value in reconstitution of the hematopoietic system following cancer therapy or bone marrow transplantation.

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, bacterial endotoxins, viruses, and prions.

FORMULATION
2xPBS pH 7.2, sterile filtered through 0.2 µm filter.

PURITY
Greater than 95% by SDS-PAGE gel analysis.

RECONSTITUTION
Note: 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 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 factor is tested for bioactivity and verified to have comparable activity to a commercial source. Bioactivity of recombinant ISOkine® human GM-CSF is measured by its dose-dependent effect on the proliferation of TF-1 cells. The ED50 for this effect is typically below 0.2 ng/ml corresponding to specific activity of > 5 x 10e6 U/mg. We recommend that the optimal concentration for each specific application be determined by an initial dose-response assay.

ENDOTOXIN LEVEL
Endotoxin level is less than 0.005ng per µg of ISOkine® product (0.05EU/µg).

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 GM-CSF contains 127 amino acids in protein and no amino acid in tag. MW is14KDa without glycosylation and around 26KDa with gycosylation.