

Animal-Free | Endotoxin-Free | Carrier-Free

Flt-3 ligand, human, recombinant

Catalog Number: IK1700

DESCRIPTION

Flt-3 ligand (Fms-like tyrosine kinase 3 ligand, flk-2 ligand) is involved in proliferation and differentiation of early hematopoietic cells. Flt-3 ligand synergizes with other CSF's and interleukins to induce proliferation of early hematopoietic cells but does not stimulate growth or differentiation alone. Flt-3 ligand binds to cells expressing the tyrosine kinase receptor FLT3. Multiple isoforms of Flt-3 ligand have been identified but the predominant biologically active isoform is a transmembrane protein which can be proteolytically cleaved to generate a biologically active soluble form.

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 Flt-3 ligand is assayed by measuring its dose-dependent effect on the proliferation of AML5 cells. The ED50 for this effect using Flt-3 ligand is typically <1 ng/ml. Optimal concentration should be determined for specific applications and cell lines.

ENDOTOXIN LEVEL

Endotoxin level is <0.0100 EU/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 Flt-3 ligand contains 155 amino acids and an N-terminal 6 amino acid histidine tag for a total length of 161 amino acids and has a predicted molecular mass of 18.44 kDa.

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