



Flt-3 Ligand, human recombinant, plant based, bio-clean

Catalog No: 99900
Lot No: XXXXX
Source: Barley grain
Synonyms: Fms-related tyrosine kinase 3 ligand, FLK2, STK1, CD135, Stem Cell Tyrosine Kinase 1, FLT3LG, Flt3

Background

Flt3-ligand (FMS related tyrosine kinase 3 ligand, flk-2 ligand) is involved in proliferation and differentiation of early hematopoietic cells. Flt3-ligand synergizes with other CSF's and interleukins to induce proliferation of early hematopoietic cells, but does not stimulate growth or differentiation alone. Flt3-ligand binds to cells expressing the tyrosine kinase receptor Flt3. Multiple isoforms of Flt3-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.

Description

Recombinant human Flt3-ligand, produced in the endosperm tissue of barley grain (*Hordeum vulgare*), contains 156 amino acids and a 16 amino acids Histidine-based tag for a total length of 172 amino acids and has a predicted molecular mass of 19.9 kDa. As a result of glycosylation, the recombinant protein migrates as two bands with an apparent molecular mass of 20 and 22 kDa in SDS-PAGE.

Physical Appearance

Lyophilized

Solubility

Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile phosphate-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.

Purity

Greater than 95% by SDS-PAGE gel analysis.

Activity

Each batch of growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of recombinant human Flt-3 ligand was determined by its dose-dependent effects on the proliferation of AML5 cells. The ED50 value is typically < 0.5 ng/ml corresponding to specific activity > 2 x 10⁶ U/mg. Optimal concentration should be determined for specific applications and cell lines.

Endotoxin Level

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

MAT Assay

Purified 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.



Usage

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