

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant Human Flt-3 Ligand (rHuFlt-3L)

Catalog Number: PR1031

Source: Escherichia coli.

Quantity: 2µg/10µg/1.0mg

Description

Flt-3 ligand (FL) is a recently identified hematopoietic cytokine whose activities are mediated by binding to the transmembrane glycoprotein Flt-3. Flt-3 was first discovered as a member of the class III subfamily of receptor tyrosine kinases (RTK) whose expression among hematopoietic cells was found to be restricted to highly enriched stem/progenitor cell populations. Additional class III RTKs include the receptors from SCF, M-CSF and PDGF. Not surprisingly, Flt-3 ligand is also structurally related to M-CSF and SCF. All three cytokines have been shown to exist both as type I transmembrane proteins and as soluble proteins. The predominant human FL isoform is a transmembrane protein that can undergo proteolytic cleavage to generate a soluble form of the protein. An alternatively-spliced FL mRNA, encoding a soluble form of the human FL, has also been identified. FL is widely expressed in various human and mouse tissues. At the amino acid sequence level, human and mouse FL are approximately 72% identical and the two proteins exhibit cross-species activity. FL has been shown to synergize with a wide variety of hematopoietic cytokines to stimulate the growth and differentiation of early hematopoietic progenitors.

Molecular Weight:

Approximately 17.6 kDa, a single non-glycosylated polypeptide chain containing 155 amino acids.

Purity:

>97% by SDS-PAGE and HPLC analyses.

Biological Activity:

Fully biologically active when compared to standard. The ED50 as calculated by the dose-dependant stimulation of the

proliferation of human AML5 cells is less than 1.0 ng/ml, corresponding to a Specific Activity of $\square 1 \times 10^6$ IU/mg.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized from a 0.2mm filtered concentrated solution in PBS, pH 7.0.

AA Sequence:

T Q D C S F Q H S P I S S D F A V K I R E L S D Y L L Q
D Y P V T V A S N L Q D E E L C G G L W R L V L A Q
R W M E R L K T V A G S K M Q G L L E R V N T E I H
F V T K C A F Q P P S C L R F V Q T N I S R L L Q E T
S E Q L V A L K P W I T R Q N F S R C L E L Q C Q P D
S S T L P P P W S P R P L E A T A P T A

Endotoxin:

Less than 1EU/mg of rHuFlt-3L as determined by LAL method.

Reconstitution:

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at <-20°C. Further dilutions should be made in appropriate buffered solutions.

Storage:

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconsti-

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tuted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

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