

Recombinant Human Fms-related Tyrosine Kinase 3 Ligand

#R00082

Size: 10 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Flt3-ligand (FL) is a recently identified hematopoietic cytokine whose activities are mediated by binding to the transmembrane glycoprotein Flt3. Flt3 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. Additionally, class III RTKs include the receptors from SCF, M-CSF and PDGF. Not surprisingly, Flt3-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.

AA Sequence

TQDCSFQHSPISSDFAVKIRELSDYLLQDYPVTVASNL
QDEELCGGLWRLVLAQRWMERLKT VAGSKMQGLLE
RVNTEIH FVTKCAFQPPPSCLRFVQTNISRLLQETSE
QLVALKPWITRQNF SRCLQLQCQPDSSTLPPPWSPR
PLEATAPTA

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.

Product Specification	
Synonyms	Flt3L, SL Cytokine
Accession	P49771
GeneID	2323
Species	Human
Source	Escherichia coli.
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 ED ₅₀ as determined by a cell proliferation assay using human AML5 cells is less than 1.0 ng/ml, corresponding to a specific activity of > 1.0 × 10 ⁶

Physical	IU/mg.
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.0.
Endotoxin	Less than 1 EU/μg of rHuFlt3-Ligand as determined by LAL method.