

Recombinant Human FLT3LG protein

Cat. No. FLT3LG-02H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human FLT3LG protein was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	155
Description	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.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Form	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.0.
Bio-activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using human AML5 cells is less than 1.0 ng/ml, corresponding to a specific activity of $> 1.0 \times 10^6$ IU/mg.
Molecular Mass	Approximately 17.6 kDa, a single non-glycosylated polypeptide chain containing 155 amino acids.
AA Sequence	TQDCSFQHSPISDFAVKIRELSDYLLQDYPVTVASNLQDEELCGGLWRLVLAQRW MERLKTIVAGSKMQGLLERVNTEIHFVTKCAFQPPPSCLRQVQTNISRLLQETSEQLV ALKPWITRQNFRCLELQCQPDSSSTLPPPWSRPLEATAPTA
Endotoxin	Less than 1 EU/µg of rHuFlt3-Ligand as determined by LAL method.
Purity	>97% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
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 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	FLT3LG
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Official Symbol	FLT3LG
Synonyms	FLT3LG; fms-related tyrosine kinase 3 ligand; flt3 ligand; FL; FLT3L;
Gene ID	2323
mRNA Refseq	NM_001204502
Protein Refseq	NP_001191431
MIM	600007
UniProt ID	P49771
SDS-PAGE of FLT3LG-02H	