

Recombinant Human Flt-3 Ligand/FLT3L (His, Flag)

Information

Gene ID	2323
Accession #	P49771
Alternate Names	Flt3L; SL Cytokine
Source	HEK293
Protein sequence	TQDCSFQHSPISDFAVKIRELSYLLQDYPVTVASNLQDEELCGGLWRLVLAQRWMERLKTVAGSKMQGL LERVNTEIHFVTKCAFQPPPSCLRFVQTNISRLQLQETSEQLVALKPWITRQNFRCLELQCQPDSTLPPPW SPRPLEATAPTAPQPP
Tag	N-His & N-Flag
M.Wt	The protein has a calculated MW of 31.3 KDa.
Appearance	Solution protein
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 36 months from date of receipt, -20 to -70°C as supplied
Concentration	1 mg/mL
Formulation	Supplied as a 0.2 µm filtered solution in PBS, pH7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Fully biologically active as determined by a cell proliferation assay using BaF3 mouse pro-B cells transfected with human Flt-3. The EC50 for this effect is 1.3 ng/mL.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95 % by SDS-PAGE.
Endotoxin	Less than 1.0 EU/µg as determined by LAL method.

Description

Flt3 ligand (FL) is a recently discovered hematopoietic cytokine whose activity is mediated through binding to the transmembrane glycoprotein Flt3. Flt3 was first identified as a member of the class III subfamily of receptor tyrosine kinases (RTKs), and its expression in hematopoietic cells is restricted to highly enriched stem/progenitor cell populations. Furthermore, class III RTKs include the receptors for SCF, M-CSF, and PDGF. Not surprisingly, Flt3 ligand is also structurally related to M-CSF and SCF. All three cytokines exist as both type I transmembrane proteins and soluble proteins. The major human FL isoform is a transmembrane protein that can undergo proteolytic cleavage to generate a soluble form of the protein. Additionally, an alternatively spliced FL mRNA encoding a soluble form of human FL has been identified. FL is widely expressed in various tissues in both humans and mice. 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 multiple hematopoietic cytokines to stimulate the growth and differentiation of early hematopoietic progenitor cells.

Reference

1. Hacein-Bey S, Basile GD, Lemerle J, et al. 1998. Blood, 92: 4090-7
2. Peters M, Solem F, Goldschmidt J, et al. 2001. Exp Hematol, 29: 146-55
3. Beq S, Fontanet A, Theze J, et al. 2004. AIDS, 18: 2089-91
4. Mahadevan D, Choi J, Cooke L, et al. 2009. Hum Genomics Proteomics, 2009: 453634.



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www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

