

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Thr27-Pro185 Accession # AAA17999
N-terminal Sequence Analysis	Thr27
Predicted Molecular Mass	18 kDa

SPECIFICATIONS

SDS-PAGE	Multiple bands between 24 kDa and 28 kDa, reducing conditions
Activity	Measured in a cell proliferation assay using BaF3 mouse pro-B cells transfected with mouse Flt-3. The ED ₅₀ for this effect is 0.2-1 ng/mL. The specific activity of Recombinant Human Flt-3 Ligand is approximately 1.2 x 10 ³ U/μg, which is calibrated against recombinant human Flt-3 Ligand WHO Standard (NIBSC code: 96/532).
Endotoxin Level	<0.10 EU per 1 μg of the protein by the LAL method.
Purity	>97%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 μm filtered solution in Acetonitrile and TFA. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute 5 μg vials at 50 μg/mL in sterile PBS. Reconstitute 25 μg or larger vials at 100 μg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 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.

DATA

<p>Bioactivity</p> <p>Recombinant Human Flt-3 Ligand (Catalog # 308-FKN/CF) stimulates cell proliferation in the BaF3 mouse pro-B cell line transfected with mouse Flt-3. The ED₅₀ for this effect is 0.2-1 ng/mL.</p>	<p>SDS-PAGE</p> <p>1 μg/lane of Recombinant Human Flt-3 Ligand was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing major bands at 24-28 kDa. Multiple bands are due to variable glycosylation.</p>
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BACKGROUND

Flt-3/Flk-2 Ligand (FL) is a hematopoietic cytokine whose activities are mediated by binding to the transmembrane glycoprotein Flt-3/Flk-2. Flt-3/Flk-2 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/Flk-2 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.

References:

1. Lyman, S.D. (1995) International Journal of Hematology **62**:63.