

PRODUCT INFORMATION

Soluble FLT3 Ligand (human, recombinant)

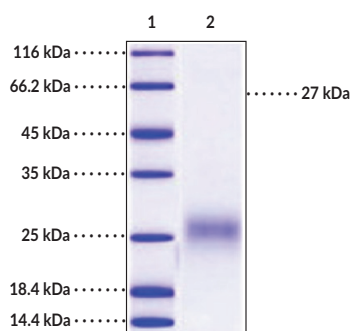
Item No. 32048

Overview and Properties

Synonyms:	FLG3L, FLT3L, FMS-related Tyrosine Kinase 3 Ligand, FMS-related Receptor Tyrosine Kinase 3 Ligand
Source:	Active recombinant human N-terminal His-tagged Soluble FLT3 ligand expressed in insect cells
Amino Acids:	27-185
Uniprot No.:	P49771-1
Molecular Weight:	20.2 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 20 mM Tris, with 300 mM sodium chloride, 10% glycerol, pH 7.5, 5% trehalose, 5% mannitol, and 0.01% Tween 80
Endotoxin Testing:	<1.0 EU/μg, determined by the LAL endotoxin assay
Bioactivity:	See figures for details

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: Soluble FLT3 Ligand

SDS-PAGE Analysis of Soluble FLT3 Ligand. This protein has a calculated molecular weight of 20.2 kDa. It has an apparent molecular weight of approximately 27 kDa by SDS-PAGE under reducing conditions due to glycosylation.

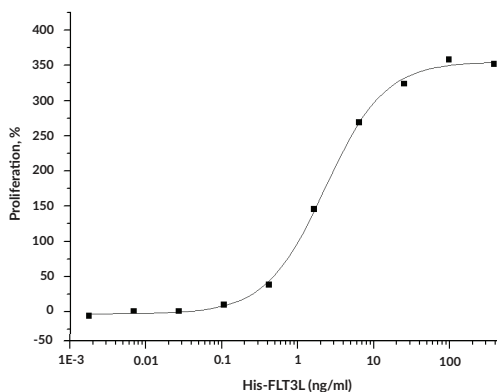


Figure 2: Cell proliferation assay using BaF3 mouse proB cells. Measured in a cell proliferation assay using BaF3 mouse proB cells transfected with mouse Flt3. The EC_{50} for this effect is typically 2-11 ng/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

FMS-related tyrosine kinase 3 ligand (FLT3L) is a type I transmembrane protein that regulates hematopoietic stem and progenitor cell proliferation, differentiation, and survival.¹ It is composed of an N-terminal signaling peptide and extracellular cytokine domain, a transmembrane domain, and a cytosolic tail.² Soluble FLT3L is formed by proteolytic cleavage of membrane-bound FLT3L at the transmembrane domain or alternative splicing. Both membrane-bound and soluble FLT3L homodimerize and bind to FLT3 to induce ligand-dependent intracellular signaling and are expressed mainly by bone marrow stroma cells.^{1,2} FLT3L synergizes with IL-7 to enhance B-lymphopoiesis and promotes IL-12-induced T cell production.³ It also acts on myeloid progenitor cells to induce proliferation of granulocytes and monocytes and increases the number of functional dendritic cells in a manner dependent on the presence of other growth factors such as GM-CSF (Item No. 32044), M-CSF, and IL-3. *Flt3l* knockdown induces hematopoietic developmental defects in mice. FLT3L induces proliferation and prevents apoptosis of acute myeloid leukemia cells *in vitro*. Cayman's Soluble FLT3 Ligand (human, recombinant) protein can be used for cell-based assay applications. This protein consists of 175 amino acids and has a calculated molecular weight of 20.2 kDa. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 27 kDa due to glycosylation.

References

1. Naoe, T. and Kiyoi, H. Normal and oncogenic FLT3. *Cell Mol. Life Sci.* **61**(23), 2932-2938 (2004).
2. Kazi, J. and Rönstrand, L. FMS-like tyrosine kinase 3/FLT3: From basic science to clinical implications. *Physiol. Rev.* **99**(3), 1433-1466 (2019).
3. Drexler, H.G. and Quentmeier, H. FLT3: Receptor and Ligand. *Growth Factors* **22**(2), 71-73 (2004).

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