

## Flt 3-L (N-19): sc-1571

### BACKGROUND

Flt 3 ligand (Flt 3-L), variously designated Flt 3/Flk 2 ligand or FL, is a hematopoietic growth factor that stimulates the proliferation of stem and CD34<sup>+</sup> progenitor cells and has been cloned from both mouse and human genomes. Flt 3-L is a potent *in vitro* growth stimulator of granulocyte-macrophage colony-stimulating factor (GM-CSF), interleukin-3 (IL-3), and G-CSF-dependent granulocyte-macrophage committed precursors from Lin CD34<sup>+</sup> bone marrow cells as well as other primitive B cell populations. Additionally, Flt 3-L stimulates the proliferation of hematopoietic progenitor cells isolated from mouse fetal liver or adult mouse bone marrow. Flt 3-L does not, however, affect the growth of erythroid-committed progenitors. Flt 3-L exists in two forms and is active as both a soluble and as a membrane-bound ligand. The Flt 3-L receptor, Flt 3, is a tyrosine kinase expressed on CD34<sup>+</sup> cells that shares a high degree of homology with the SCF (stem cell factor) receptor, c-Kit and c-Fms.

### REFERENCES

1. Hudak, S., et al. 1995. Flt 3/Flk 2 ligand promotes the growth of murine stem cells and the expansion of colony-forming cells and spleen colony-forming units. *Blood* 85: 2747-2755.
2. Lyman, S.D., et al. 1995. Structural analysis of human and murine Flt 3 ligand genomic loci. *Oncogene* 11: 1165-1172.
3. Lyman, S.D., et al. 1995. Identification of soluble and membrane-bound isoforms of the murine Flt3 ligand generated by alternative splicing of mRNAs. *Oncogene* 10: 149-157.
4. Gabbianelli, M., et al. 1995. Multi-level effects of Flt 3 ligand on human hematopoiesis: expansion of putative stem cells and proliferation of granulomonocytic progenitors/monocytic precursors. *Blood* 86: 1661-1670.
6. Meierhoff, G., et al. 1995. Expression of Flt 3 receptor and Flt 3-ligand in human leukemia-lymphoma cell lines. *Leukemia* 9: 1368-1372.
5. Hunte, B.E., et al. 1996. Flk 2/Flt 3 ligand is a potent cofactor for the growth of primitive B cell progenitors. *J. Immunol.* 156: 489-496.

### CHROMOSOMAL LOCATION

Genetic locus: FLT3LG (human) mapping to 19q13.33.

### SOURCE

Flt 3-L (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Flt 3-L of human origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1571 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### APPLICATIONS

Flt 3-L (N-19) is recommended for detection of Flt 3-L of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

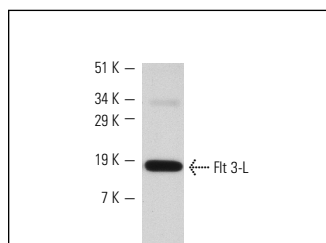
Suitable for use as control antibody for Flt 3-L siRNA (h): sc-39488, Flt 3-L shRNA Plasmid (h): sc-39488-SH and Flt 3-L shRNA (h) Lentiviral Particles: sc-39488-V.

Molecular Weight of Flt 3-L: 30 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### DATA



Flt 3-L (N-19): sc-1571. Western blot analysis of human recombinant Flt 3-L.

### SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2009. Synergistic protecting effect of cord blood CD34<sup>+</sup> cells over-expressing both interleukin-3 and Flt3 ligand on lethally irradiated mice. *Int. J. Hematol.* 90: 64-73.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

**MONOS**  
Satisfaction  
Guaranteed

Try **Flt 3-L (F-6): sc-365266**, our highly recommended monoclonal alternative to Flt 3-L (N-19).