

Flt 3-L (F-6): sc-365266

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⁺ 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⁺ 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⁺ 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. Gabbianelli, M., et al. 1995. Multi-level effects of Flt3 ligand on human hematopoiesis: expansion of putative stem cells and proliferation of granulomonocytic progenitors/monocytic precursors. *Blood* 86: 1661-1670.

CHROMOSOMAL LOCATION

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

SOURCE

Flt 3-L (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 32-59 at the N-terminus of Flt 3-L of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Flt 3-L (F-6) is available conjugated to agarose (sc-365266 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365266 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365266 PE), fluorescein (sc-365266 FITC), Alexa Fluor® 488 (sc-365266 AF488), Alexa Fluor® 546 (sc-365266 AF546), Alexa Fluor® 594 (sc-365266 AF594) or Alexa Fluor® 647 (sc-365266 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365266 AF680) or Alexa Fluor® 790 (sc-365266 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365266 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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 (F-6) is recommended for detection of Flt 3-L of human origin by Western Blotting (starting dilution 1:100, 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).

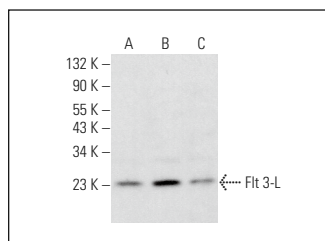
Suitable for use as control antibody for Flt 3-L siRNA (h): sc-39488, Flt 3-L shRNA Plasmid (h): sc-39488-SH and Flt 3-L shRNA (h) Lentiviral Particles: sc-39488-V.

Molecular Weight of Flt 3-L: 30 kDa.

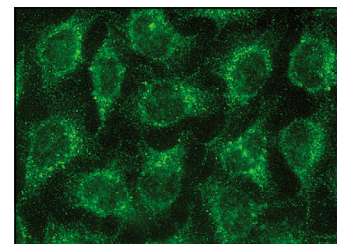
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Flt 3-L (F-6): sc-365266. Western blot analysis of Flt 3-L expression in NIH/3T3 (A), WEHI-231 (B) and C2C12 (C) whole cell lysates.



Flt 3-L (F-6): sc-365266. Immunofluorescence staining of methanol-fixed HeLa cells showing granular cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Xu, Q., et al. 2016. Enhanced efficacy of DNA vaccination against botulinum neurotoxin serotype A by co-administration of plasmids encoding DC-stimulating Flt 3-L and MIP-3α cytokines. *Biologicals* 44: 441-447.
2. Li, L., et al. 2019. Classical dendritic cells regulate acute lung inflammation and injury in mice with lipopolysaccharide-induced acute respiratory distress syndrome. *Int. J. Mol. Med.* 44: 617-629.
3. Choi, D.W., et al. 2020. Co-transplantation of tonsil-derived mesenchymal stromal cells in bone marrow transplantation promotes thymus regeneration and T cell diversity following cytotoxic conditioning. *Int. J. Mol. Med.* 46: 1166-1174.

RESEARCH USE

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