SANTA CRUZ BIOTECHNOLOGY, INC.

Flt 3-L (mBA-144): sc-4861

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Flt 3 ligand (Flt 3-L), variously designated Flt 3/Flk 2 ligand or FL, is a 17 kDa 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. A Flt-3 ligand 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) receptors, c-Kit and c-Fms.

REFERENCES

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SOURCE

Flt 3-L (mBA-144) is produced in *E. coli* as 42 kDa biologically active, tagged fusion protein corresponding to 136 amino acids of Flt 3-L of mouse origin.

PRODUCT

Flt 3-L (mBA-144) is purified from bacterial lysates (>98%); supplied as 50 µg purified protein.

BIOLOGICAL ACTIVITY

Flt 3-L (mBA-144) is biologically active as determined by its ability to generate $CD11c^+$ splenic dendritic cells *in vivo* in C57B1/6 mice (females, approximately 12 weeks old). To obtain the desired affect, mice were treated with approximately 25 µg of Flt 3-ligand once daily for 9 consecutive days via intraperitoneal injection.

RECONSTITUTION

In order to avoid freeze/thaw damaging of the active protein, dilute protein when first used to desired working concentration. Either a sterile filtered standard buffer (such as 50mM TRIS or 1X PBS) or water, can be used for the dilution. Store any thawed aliquot in refrigeration at 2° C – 8° C for up to four weeks, and any frozen aliquot at -20° C – -80° C for up to one year. It is recommended that frozen aliquots be given an amount of standard cryopreservative (such as Ethylene Glycol or Glycerol 5-20% v/v), and refrigerated samples be given an amount of carrier protein (such as heat inactivated FBS or BSA to 0.1% v/v) or non-ionic detergent (such as Triton X-100 or Tween 20 to 0.005% v/v), to aid stability during storage.

STORAGE

Store dessicated at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.