

Flt 3-L (hBA-155): sc-4860

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 (hBA-155) is produced in *E. coli* as 17.6 kDa biologically active protein corresponding to 155 amino acids of Flt 3-L of human origin.

PRODUCT

Flt 3-L (hBA-155) is purified from bacterial lysates (>98%); supplied as 10 µg purified protein.

BIOLOGICAL ACTIVITY

Flt 3-L (hBA-155) is biologically active as determined by dose-dependent stimulation of the proliferation of human AML5 cells is < 1.0 ng/ml, corresponding to a specific activity of > 1 x 10⁶ units/mg.

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 to 8° C for up to four weeks, and any frozen aliquot at -20° C to -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 desiccated 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.