APA038Hu01 100μg
Active FMS Like Tyrosine Kinase 3 Ligand (Flt3L)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Met83~Pro182
Tags: N-terminal His and GST Tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 8.7
Predicted Molecular Mass: 45.7kDa
Accurate Molecular Mass: 43kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

MERLKTVA GSKMQGLLER
VNTEIHFVTK CAFQPPPSCL RFVQTNISRL LQETSEQLVA LKPWITRQNF
SRCLELQCQP DSSTLPPPWS PRPLEATAPT AP

[ACTIVITY]

FMS-like tyrosine kinase 3 ligand (Flt3L) is a crucial hematopoietic cytokine primarily produced by bone marrow stromal cells and lymphocytes. It functions as a key regulator for the proliferation, differentiation, and survival of early hematopoietic progenitor cells and dendritic cells. Due to its vital role in stimulating the immune system, Flt3L is extensively investigated as a potential therapeutic agent in cancer immunotherapy and for enhancing immune reconstitution following bone marrow transplantation. Its mechanism of action is exclusively mediated through binding and activation of its cognate receptor, Flt3 is a type III receptor tyrosine kinase expressed on the surface of target cells. This specific ligand-receptor interaction induces Flt3 dimerization and autophosphorylation, initiating critical intracellular signaling cascades, such as the MAPK and PI3K pathways, that drive cell proliferation and differentiation.Thus a functional ELISA assay was conducted to detect the interaction of recombinant human Flt3L and recombinant human Flt3. Briefly, Flt3L was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μL were then transferred to Flt3-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-Flt3L pAb, then aspirated and washed 3 times. After incubation with HRP labeled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were

incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human Flt3L and recombinant human Flt3 was shown in Figure 1, the EC50 for this effect is 0.06262 μg/mL.

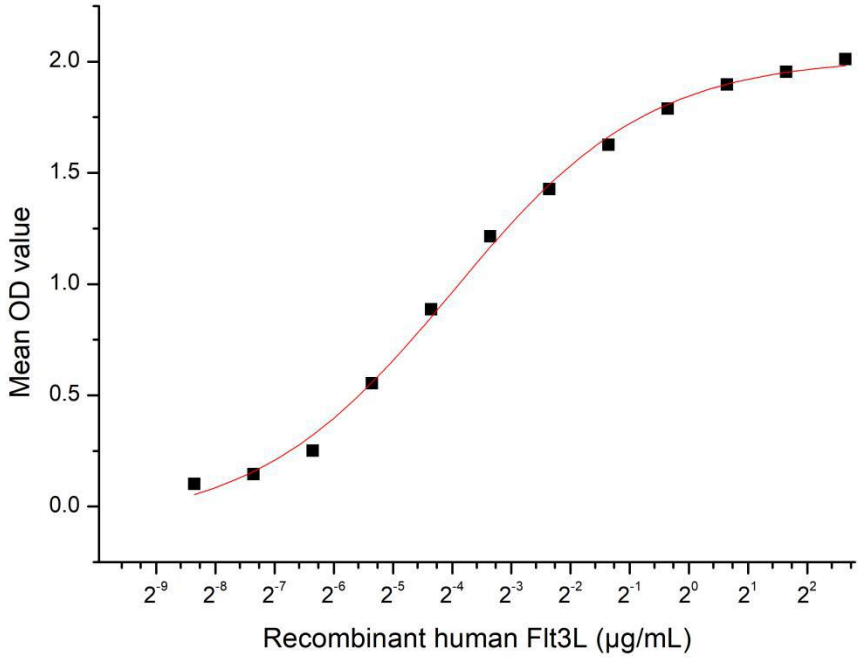

Figure 1. The binding activity of recombinant Flt3L and human Flt3

[IDENTIFICATION]

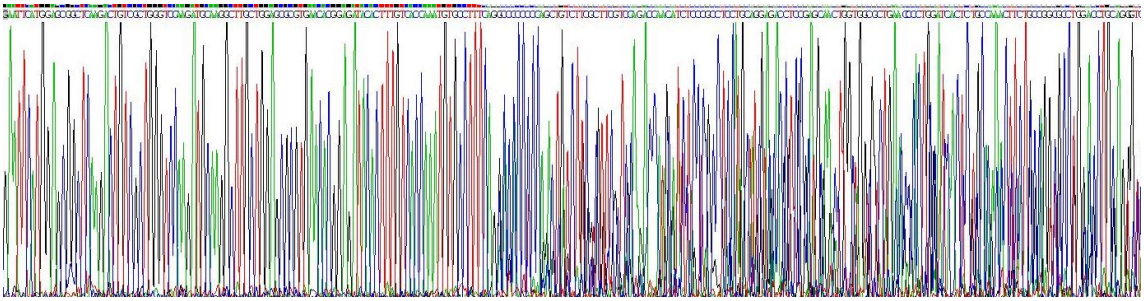

Figure 2. Gene Sequencing (extract)

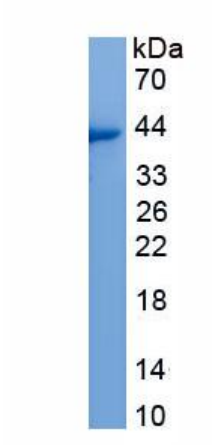

Figure 3. SDS-PAGE

Sample: Active recombinant Flt3L, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.