APA120Hu61 100μg
Active Stem Cell Factor (SCF)
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: Eukaryotic expression.
Host: 293F cell
Residues: Glu26~Ala189
Tags: N-terminal His Tag and C-terminal Fc Region of Human IgG1
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 4.8
Predicted Molecular Mass: 49.5kDa
Accurate Molecular Mass: 65kDa as determined by SDS-PAGE reducing conditions.
Phenomenon explanation:
The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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 2-8°C for one month.
Aliquot and store at -80°C 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 37°C 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.

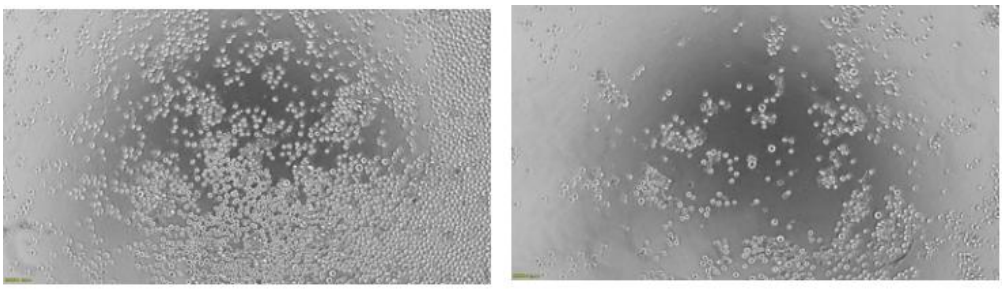
[SEQUENCE]

EGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSHCWISEMVVQLSDSLTDLLDKFSNISEG
LSNYSIIDKLVNIVDDLVECVKENSSKDLKKSFKSPEPRLFTPEEFFRIFNRSIDAFKDFVVASETSDC
VVSSTLSPEKDSRVSVTKPFMLPPVA

[ACTIVITY]

Stem cell factor (SCF), also known as mast cell growth factor (MGF), and steel factor (SLF), plays an important role in hematopoiesis, spermatogenesis and melanogenesis. SCF has been shown to stimulate the proliferation of TF-1 cells. To test this effect, TF-1 cells were seeded into triplicate wells of 96-well plates at a density of 2 x 104 cells/well and incubated for 72h in the presence or absence of various concentrations of SCF at 37℃ The growth of cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8(CCK-8). Briefly, 10 µl of CCK-8 solution was added to each well of the plate, then measure the absorbance at 450 nm using a microplate reader after incubating the plate for 1-4 hours at 37℃. Cell proliferation of TF-1 cells after incubation with SCF for 72h observed by inverted microscope was shown in Figure 1. The dose-effect curve of SCF was shown in Figure 2. It was obvious that

it significantly promoted cell proliferation of TF-1 cells. The ED50 for this effect is typically 3.9 ng/ml.



A B

Figure 1. Cell proliferation of TF-1 cells after stimulated with SCF .

(A) TF-1 cells cultured in RPMI-1640, stimulated with 8 ng/ml SCF for 72h;

(B) Unstimulated TF-1 cells cultured in RPMI-1640 for 72h.

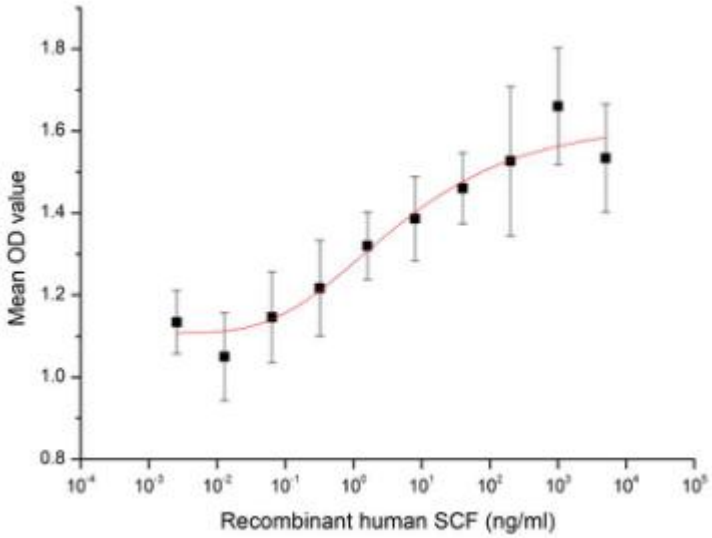


Figure 2. The dose-effect curve of SCF on TF-1 cells

[IDENTIFICATION]

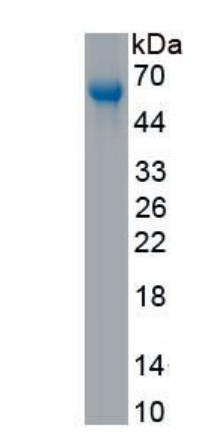


Figure 3. SDS-PAGE

Sample: Active recombinant SCF, 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.