

Product No. S-6045
Lot 035H0955

Anti-Mouse Stem Cell Factor (SCF) (*c-kit* Ligand)

Developed in Goat
IgG Fraction of Antiserum

Anti-Mouse SCF is developed in goat using recombinant, mouse stem cell factor (SCF), expressed in *E. coli*, as the immunogen. The antibody is purified by Protein G affinity chromatography. Goat Anti-SCF is provided lyophilized from phosphate buffered saline (PBS), pH 7.4, to which no preservatives have been added.

Description

Stem cell factor¹ (SCF) [also known as *c-kit* Ligand² (KL) or Mast Cell Growth Factor³ (MGF)] is a peptide growth factor/cytokine associated with broad activities, mainly hematopoiesis. Among SCF's many activities are the ability to act on early hematopoietic progenitor/stem cells and to stimulate the proliferation and survival of mast cells. SCF is one of the most potent stimulators of multilineage progenitors (CFU-GEMM) in both human and mouse bone marrow cells.^{2,4} The gene encoding *c-kit* Ligand is a putative product of the murine steel locus.⁵

Performance

Anti-Mouse SCF is tested for its ability to neutralize the biological activity of SCF on TF-1 cells. The ND₅₀ of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of SCF that was present at 5 times its own EC₅₀ (the concentration of rmSCF producing a one-half maximal bioactivity without antibody). In this bioassay, SCF was pre-incubated with various dilutions of the antibody for 1 hour at 37°C in a 96-well microtiter plate. Then, TF-1 cells were added to each well to give a final concentration of 1x10⁵ cells/ml in 0.1 ml containing 25 ng/ml SCF. This was incubated for 48 hours at 37°C in a 5% CO₂ humidified incubator and then pulsed for 4 hours with ³H-thymidine. Cells were harvested onto glass filters and the ³H-thymidine incorporation into DNA was measured.

Product Information

Mass/vial: 1.0 mg
Immunogen: Recombinant, mouse SCF
Host Animal: Goat
Formulation: Lyophilized from PBS without additives.
Endotoxin: <10 ng/vial by LAL method
Bioactivity: ND₅₀ = 9.4 µg/ml
Indirect ELISA: 1.0 µg/ml antibody detects 0.1 ng/well of rmSCF.
Indirect
Immunoblotting: 2 µg/ml antibody detects rmSCF at 1.0 ng/lane.
Sterility: 0.2 µm-filtered, aseptic fill

Reconstitution and Use

To one vial of lyophilized powder, add 1 ml of 0.2 µm-filtered PBS to produce a 1.0 mg/ml stock solution of Anti-Mouse SCF. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage

Prior to reconstitution, store at -20°. Reconstituted product may be stored at 2-8°C. For prolonged storage, freeze in working aliquots at -20°C. Avoid repeated freezing and thawing.

References

1. Zsebo, K., et al., *Cell*, **63**, 195 (1990).
2. Nocka, K., et al., *EMBO J.*, **9**, 3287 (1990).
3. Williams, D., et al., *Cell*, **63**, 167 (1990).
4. Broxmeyer, H., et al., *Blood*, **77**, 2142 (1991).
5. Copeland, N., et al., *Cell*, **63**, in press.

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