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Monoclonal Antibody to CD117 / c-kit - FITC

Alternate names: KIT, Mast/stem cell growth factor receptor, Proto-Oncogene Tyrosine-Protein Kinase, SCFR

Catalog No.: CL042FX

Quantity: 0.3 mg

Concentration: 0.1 mg/ml

Background: CD117 or c-kit is a receptor tyrosine kinase. The ligand for this receptor is steel factor (stem cell factor), which exists in both soluble and membrane form. The interaction between steel factor and c-kit is essential for the development of hematopoietic, gonadal and pigment stem cells.

Uniprot ID: P05532

NCBI: NP_066922.2

GeneID: 16590

Host / Isotype: Rat / IgG2a

Clone: ACK4

Immunogen: IL-3 dependent mast cells derived from WB- +/+ mice.
Donor: Wistar spleen.
Fusion Partner: X63.653. Ag8.

Format: **State:** Liquid purified Ig fraction.
Purification: Protein G Chromatography.
Buffer System: PBS containing 0.02% Sodium Azide as preservative and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml.
Label: FITC – Fluorescein Isothiocyanate Isomer 1
Absorption / Emission: 495 nm / 528 nm

Applications: Flow Cytometry.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: Recognizes the receptor tyrosine kinase, c-kit (CD117). c-kit positive cells are a subset of CD34+ hematopoietic precursor cells and it is expressed on 5-10% of total adult bone marrow cells.
Species: Mouse.
Other species not tested.

Storage:

Store the antibody undiluted at 2-8°C for one month.
For long term storage, aliquot and freeze unused portion at -20°C in volumes appropriate for single usage.
This product is photosensitive and should be protected from light
Avoid freeze/thaw cycles.
Shelf life: One year from despatch.

General References:

1. Ogawa, M., Y. Matsuzaki, S. Nishikawa, S. Hayashi, T. Kunisada, T. Sudo, T. Kina, H. Nakauchi, S. Nishikawa. 1991. Expression and Function of c-kit in Hematopoietic Progenitor Cells. J. Exp. Med. 174:63-71
2. Suda, T., S. Okada, J. Suda, Y. Miura, M. Ito, T. Sudo, S. Hayahsi, S. Nishikawa, H. Nakauchi. 1989. A Stimulatory Effect of Recombinant Murine Interleuken-7 (IL-7) on B-Cell Colony Formation and Inhibitory Effect of IL-1a. Blood 74(6):1936-1941

Protocols:

FLOW CYTOMETRY ANALYSIS:

Method:

1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population with cell separation medium.
2. Wash 2 times.
3. Resuspend the cells to a concentration of 2x10e7 cells/ml in media A. Add 50 µl of this suspension to each tube (each tube will then contain 1 x 10e6 cells, representing 1 test).
4. To each tube, add 1 µg* of CL042F per 10e6 cells.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at 4°C.
(It is recommended that the tubes are protected from light, since most fluorochromes are light sensitive.)
7. Wash 2 times at 4°C.
8. Resuspend the cell pellet in 50 µl ice cold media B.
9. Transfer to suitable tubes for flow cytometric analysis containing 15 µl of propidium iodide at 0.5 mg/ml in PBS. This stains dead cells by intercalating in DNA.

Media:

A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + sodium azide (100 µl of 2M sodium azide in 100 mls).
B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100 µl of 2M sodium azide in 100 mls).