

Monoclonal Antibody to CD117 / c-kit - FITC

Alternate names:	KIT, Mast/stem cell growth factor receptor, Proto-Oncogene Tyrosine-Protein Kinase, SCFR
Catalog No.:	CL042F
Quantity:	0.1 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 <i>Absorption / Emission: 495 nm / 528 nm</i>
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.

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Antibody Hotline - Technical Questions - Antibody Location Service
Free Call: 0800-2274746 (Germany only) - www.acris-antibodies.com

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. Hayashi, S. Nishikawa, H. Nakauchi. 1989. A Stimulatory Effect of Recombinant Murine Interleukin-7 (IL-7) on B-Cell Colony Formation and Inhibitory Effect of IL-1a. *Blood* 74(6):1936-1941

Protocols:**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 2×10^7 cells/ml in media A. Add 50 μ l of this suspension to each tube (each tube will then contain 1×10^6 cells, representing 1 test).
4. To each tube, add 1 μ g* of CL042F per 10^6 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 μ l ice cold media B.
9. Transfer to suitable tubes for flow cytometric analysis containing 15 μ l 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 μ l of 2M sodium azide in 100 mls).
B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100 μ l of 2M sodium azide in 100 mls).

Results:Tissue Distribution by Flow Cytometry Analysis:

Mouse Strain: BALB/c
Cell Concentration : 1×10^6 cells per test
Antibody Concentration Used: 0.2 μ g/ 10^6 cells
Isotypic Control: FITC Rat IgG2a

Strain Distribution by Flow Cytometry Analysis:

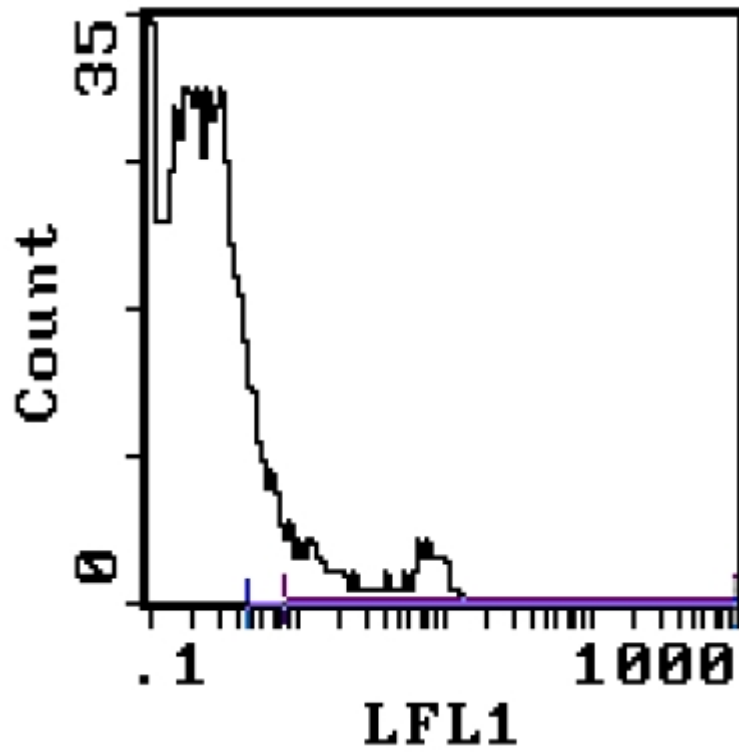
Cell Concentration : 1×10^6 cells per test
Antibody Concentration Used: 0.2 μ g / 10^6 cells
Strains Tested: AKR, BALB/c, C3H/He, C57BL/6
Positive: AKR, BALB/c, C3H/He, C57BL/6
Negative: none

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Pictures:



Cell Source: Bone Marrow

Percentage of cells stained above control: 7.0%

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