
Monoclonal Antibody To Mouse CD117 (c-kit) Receptor for Stem Cell Factor

Monoclonal antibody ACK4 recognizes the receptor for Stem Cell Factor (SCF) / Steel Factor. The cellular function of CD117 is that of a growth factor receptor. The ligand exists in both soluble and membrane form. The interaction between SCF and c-kit is essential for the development of hematopoietic, gonadal and pigment stem cells. c-kit positive cells are a subset of CD34⁺ hematopoietic precursor cells, expression of CD117 can be found on 5-10% of total adult bone marrow cells.

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| Product Number: | T-2033 (Lot 01PO1004) |
| Clone: | ACK4 |
| Host species, isotype: | Rat IgG2a |
| Quantity: | 200µg |
| Format: | Affinity purified, lyophilized Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.4mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 5mg/ml bovine serum albumin (BSA) as a stabilizer and 0.09% sodium azide as a preservative. |
| Stability: | Original vial: 1 year at 4° - 8°C Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing. |
| Applications: | Tested for immunohistochemistry (IHC); has been described to work in FACS. Approximate working dilution for IHC: Frozen sections: 0.4µg/ml (1:1000) Paraffin sections: does not react on routinely processed paraffin sections. Suggested positive control: Mouse spleen and tongue Please see www.bma.ch for protocols and general information. |
| Immunogen: | IL-3 dependent mast cells derived from WB+/+ mice. |
| Antigen, epitope: | The antigen is a 145kD membrane protein (reduced or unreduced) that belongs to the immunoglobulin supergene family. The epitope has not been characterized. |

Antigen distribution:

Isolated Cells: The antigen is described to be present on 5-10% of total adult bone marrow cells.

Tissue Sections: The antigen is expressed on CD117 positive cells in various tissues e.g. in mouse spleen and tongue. There is a staining on cells in the red pulp of spleen, whereas there are only few cells with strong staining in tongue.

Specificity:

Mouse: receptor for stem cell factor

Other species: not tested

Selected references

Ogawa, M. et al.: Expression and Function of c-kit in Hematopoietic Progenitor Cells. J. Exp. Med 174: 63-71 (1991)

Suda, T. et al.: A Stimulatory effect of Recombinant Murine Interleukin-7 (IL-7) on B-Cell Colony Formation and Inhibitory Effect of IL-1 α . Blood 74(6): 1936-41 (1989).

Kunisada, T. et al.: Murine Cutaneous Mastocytosis and Epidermal Melanocytosis Induced by Keratinocyte Expression of Transgenic Stem Cell Factor: J. Exp. Med. 187(10): 1565-73 (1998).

For *in vitro* research only. Caution: this product contains sodium azide, a poisonous and hazardous substance.