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Monoclonal Antibody To Human Stem Cell Factor (SCF)

c-Kit Ligand, Mast Cell Growth Factor, steel factor

SCF is a transmembrane protein expressed as two alternatively spliced isoforms, either 220 or 248 amino acids, the former lacking a peptidase cleavage site. The cleavage site is respnsible for the release of the soluble form of the protein from the cell surface. The first 164 or 165 residues of the extracellular domain comprise soluble SCF, which exists in solution as a noncovalently linked homodimer. Alone, SCF is a relatively weak proliferative stimulus but acts synergistically with numerous cytokines. SCF is important in germ cell development, and an indispensable factor for mast cell proliferation and differentiation.

Monoclonal antibody hKL12 is specific for human SCF (hSCF). Synonyms for hSCF are c-Kit ligand, mast cell growth factor and steel factor. hKL 12 is useful for the detection of hSCF in tissues, isolated cells and biological fluids, and for studying biological effects of human stem cell factor *in vitro*.

Product number: T-1417
Clone: hKL 12
Lot: 04PO0806
TECHNICAL AND ANALYTICAL CHARACTERISTICS:

Host species, subclass:	Mouse IgG1
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),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 ELISA; has been described to work in immunohistochemistry (IHC) and Western Blots.
	Approximate working dilution: This product has shown a titer of 0.15µg/ml in ELISA against the recombinant antigen. Not tested in other applications. Optimal concentrations should be determined by the end user.
	Please see **www.bma.ch** for protocols and general information.
Immunogen:	Recombinant human stem cell factor. Recombinant hSCF is an 18.4 kDa polypeptide containing 165 amino acid residues, corresponding to the sequence of the soluble form of SCF.

Antigen, epitope:	The antigen is a 248 residue protein. The full-length transcript of the corresponding gene product includes a 25-amino acid secretory leader, a 189-amino acid extracellular domain, a 23-amino acid transmembrane region, and a 36-amino acid cytoplasmic tail. The epitope has not been further characterized.
Antigen distribution:	**Tissue sections:** Bone marrow stromal cells, fibroblasts, and fetal liver cells express SCF. Keratinocytes stain positive.
Specificity:	**Human:** Stem cell factor.
	Other species: due to 99% sequence homology between human and primate SCF the antibody is expected to react positively with primate tissues.

Selected references

E. Dippel, N. Haas, J. Grabbe, D. Schadendorf, K. Hamann, B.M. Czarnetzki: Expression of the c-kit receptor in hypomelanosis: a comparative study between piebaldism, naevus depigmentosus and vitiligo. Brit. J. Dermatol. (1995) 132: 182-189).

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