

# SCF (mBA-164): sc-4877

## BACKGROUND

The 31 kDa stem cell factor (SCF) is the ligand for the transmembrane tyrosine kinase receptor proto-oncogene c-Kit (1–4). SCF, also designated KL, MGF and SLF, is a pleiotropic cytokine that has two alternatively spliced forms, 248 and 220 amino acids in length in human and mouse systems, respectively (3–5). Both the larger 45 kDa form and the smaller 31 kDa form are cleaved to produce soluble 31 kDa and 23 kDa forms, respectively (3,4). The smaller splice variant lacks the proteolytic cleavage site, between amino acids 149 and 177 of the larger SCF form (5). The larger SCF form is expressed in fibroblasts, brain and thymus, while the smaller SCF form is found in the spleen, testis, placenta and cerebellum (3). The SCF ligand is essential for the development of germ cells, hematopoietic progenitor cells and melanocyte precursors (6). With respect to mast cells, SCF can stimulate the proliferation of mature as well as the maturation and proliferation of immature mast cells (6).

## SOURCE

SCF (mBA-164) is produced in *E. coli* as 45 kDa biologically active protein corresponding to 164 amino acids of SCF of mouse origin.

## PRODUCT

SCF (mBA-164) is purified from bacterial lysates (>98%); supplied as 50 µg purified protein.

## BIOLOGICAL ACTIVITY

SCF (mBA-164) is biologically active as determined by the dose-dependent stimulation of the proliferation of the human MO7e cell line.

Specific Activity: > 2.5 x 10<sup>4</sup> units/mg.

## STORAGE

Store at -20° C; stable for one year from the date of shipment.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## BACKGROUND REFERENCES

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