SANTA CRUZ BIOTECHNOLOGY, INC.

M-CSF (hBA-158): sc-4894

BACKGROUND

The macrophage colony-stimulating factor (M-CSF), also designated CSF-1, was originally discovered in serum, urine and other biological fluids as a factor that can stimulate the formation of macrophage colonies from bone marrow hematopoietic progenitor cells. M-CSF is a homodimeric cytokine that is produced by fibroblasts, epithelial cells, bone marrow stromal cells, osteoblasts, keratinocytes, macrophages, T cells and B cells. M-CSF is a glycoprotein required for the proliferation and differentiation of mononuclear phagocytes, including osteoclasts. M-CSF has also been identified as an important mediator of the inflammatory response and can regulate the release of proinflammatory cytokines from macrophages. M-CSF exerts its pleiotropic effects by binding to a single type of high affinity cell surface receptor that is encoded by the c-Fms proto-oncogene.

REFERENCES

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PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

SOURCE

M-CSF (hBA-158) is produced in *E. coli* as 36.8 kDa biologically active, GST-tagged fusion protein corresponding to homodimeric protein containing two 159 amino acid polypeptide subunits of M-CSF of human origin

PRODUCT

M-CSF (hBA-158) is purified from bacterial lysates (>98%); supplied as 10 µg purified protein.

BIOLOGICAL ACTIVITY

M-CSF (hBA-158) is biologically active as determined by a cell proliferation assay using M-CSF-dependent murine monocytic cell line, M-NSF-60.

Expected ED_{50}: = 0.5–1.5 ng/ml.

RECONSTITUTION

In order to avoid freeze/thaw damaging of the active protein, dilute protein when first used to desired working concentration. Either a sterile filtered standard buffer (such as 50mM TRIS or 1X PBS) or water can be used for the dilution. Store any thawed aliquot in refrigeration at 2° C to 8° C for up to four weeks, and any frozen aliquot at -20° C to -80° C for up to one year. It is recommended that frozen aliquots be given an amount of standard cryo-preservative (such as Ethylene Glycol or Glycerol 5-20% v/v), and refrigerated samples be given an amount of carrier protein (such as heat inactivated FBS or BSA to 0.1% v/v) or non-ionic detergent (such as Triton X-100 or Tween 20 to 0.005% v/v), to aid stability during storage.

STORAGE

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

RESEARCH USE

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