

GM-CSF (M-19): sc-1320

BACKGROUND

Colony stimulating factors (CSFs) were initially characterized by their ability to stimulate *in vitro* colony formation by hematopoietic progenitor cells in semi-solid media. Several of these CSFs have been assigned an interleukin number, while three (GM-CSF, G-CSF and M-CSF) have retained their CSF designations. The human granulocyte-macrophage colony stimulating factor (GM-CSF) is a pleiotropic cytokine with a 17 amino acid signal peptide that is cleaved to produce the mature form of 127 amino acids. The mature murine GM-CSF protein is 124 amino acids and shares 60 percent homology with the human GM-CSF protein. GM-CSF is a glycoprotein that can stimulate the proliferation of hematopoietic cells including granulocytes and macrophages. It has been shown to promote the phosphorylation of cPLA2 in human neutrophils. The phosphorylation of cPLA2 was accompanied by an increase in the enzyme activity.

REFERENCES

1. Wong, G.G., et al. 1985. Human GM-CSF: molecular cloning of the complementary DNA and purification of the natural and recombinant proteins. *Science* 228: 810-815.
2. Lee, F., et al. 1985. Isolation of cDNA for a human granulocyte-macrophage colony-stimulating factor by functional expression in mammalian cells. *Proc. Natl. Acad. Sci. USA* 82: 4360-4364.
3. Cantrell, M.A., et al. 1985. Cloning, sequence, and expression of a human granulocyte-macrophage colony-stimulating factor. *Proc. Natl. Acad. Sci. USA* 82: 6250-6254.
4. Kaushansky, K., et al. 1986. Genomic cloning, characterization, and multilineage growth-promoting activity of human granulocyte-macrophage colony-stimulating factor. *Proc. Natl. Acad. Sci. USA* 83: 3101-3105.
5. Moore, M.A. 1991. The clinical use of colony stimulating factors. *Annu. Rev. Immunol.* 9: 159-191.

CHROMOSOMAL LOCATION

Genetic locus: CSF2 (human) mapping to 5q31.1; Csf2 (mouse) mapping to 11 B1.3.

SOURCE

GM-CSF (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GM-CSF of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1320 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

GM-CSF (M-19) is recommended for detection of GM-CSF of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

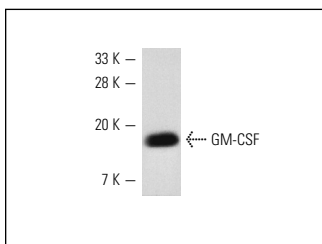
Suitable for use as control antibody for GM-CSF siRNA (h): sc-39391, GM-CSF siRNA (m): sc-39392, GM-CSF shRNA Plasmid (h): sc-39391-SH, GM-CSF shRNA Plasmid (m): sc-39392-SH, GM-CSF shRNA (h) Lentiviral Particles: sc-39391-V and GM-CSF shRNA (m) Lentiviral Particles: sc-39392-V.

Molecular Weight of GM-CSF: 14 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GM-CSF (M-19): sc-1320. Western blot analysis of mouse recombinant GM-CSF.

RESEARCH USE

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

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **GM-CSF (B6-2-hGMCSF): sc-32753** or **GM-CSF (A-6): sc-377039**, our highly recommended monoclonal alternatives to GM-CSF (M-19).