

GM-CSF (FL-144): sc-13101

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. Suda, T., et al. 1990. Identification of a novel thymocyte growth-promoting factor derived from B cell lymphomas. *Cell. Immunol.* 129: 228-240.
2. Nozaki, S., et al. 1991. Augmentation of granulocyte/macrophage colony-stimulating factor expression by ultraviolet irradiation is mediated by interleukin 1 in Pam 212 keratinocytes. *J. Invest. Dermatol.* 97: 10-14.
3. 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.

SOURCE

GM-CSF (FL-144) is a rabbit polyclonal antibody raised against amino acids 1-144 representing full length GM-CSF of human origin.

PRODUCT

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

APPLICATIONS

GM-CSF (FL-144) is recommended for detection of GM-CSF of human and rat 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 shRNA Plasmid (h): sc-39391-SH and GM-CSF shRNA (h) Lentiviral Particles: sc-39391-V.

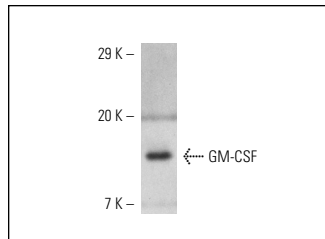
Molecular Weight of GM-CSF: 14 kDa.

Positive Controls: human PBL whole cell lysate.

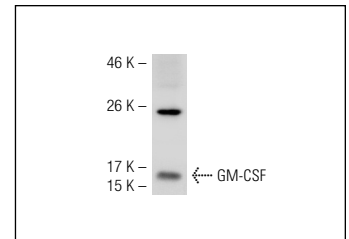
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GM-CSF (FL-144): sc-13101. Western blot analysis of human recombinant GM-CSF.



GM-CSF (FL-144): sc-13101. Western blot analysis of GM-CSF expression in human PBL whole cell lysate.

SELECT PRODUCT CITATIONS

1. Savchenko, A.S., et al. 2006. Development and maturation of thymic dendritic cells during human ontogeny. *Cell Tissue Res.* 325: 455-460.
2. Mascia, F., et al. 2010. EGFR regulates the expression of keratinocyte-derived granulocyte/macrophage colony-stimulating factor *in vitro* and *in vivo*. *J. Invest. Dermatol.* 130: 682-693.
3. Ridwan, S., et al. 2012. Distribution of granulocyte-monocyte colony-stimulating factor and its receptor α -subunit in the adult human brain with specific reference to Alzheimer's disease. *J. Neural Transm.* 119: 1389-1406.

STORAGE

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

RESEARCH USE

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



Try **GM-CSF (B6-2-hGMCSF): sc-32753** or **GM-CSF (A-6): sc-377039**, our highly recommended monoclonal alternatives to GM-CSF (FL-144).