

# GM-CSF (B6-2-hGMCSF): sc-32753

## 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% 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 cPLA<sub>2</sub> in human neutrophils. The phosphorylation of cPLA<sub>2</sub> was accompanied by an increase in the enzyme activity.

## CHROMOSOMAL LOCATION

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

## SOURCE

GM-CSF (B6-2-hGMCSF) is a mouse monoclonal antibody raised against recombinant GM-CSF of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GM-CSF (B6-2-hGMCSF) is available conjugated to agarose (sc-32753 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32753 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32753 PE), fluorescein (sc-32753 FITC), Alexa Fluor® 488 (sc-32753 AF488), Alexa Fluor® 546 (sc-32753 AF546), Alexa Fluor® 594 (sc-32753 AF594) or Alexa Fluor® 647 (sc-32753 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32753 AF680) or Alexa Fluor® 790 (sc-32753 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

GM-CSF (B6-2-hGMCSF) is recommended for detection of GM-CSF of mouse, rat and 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

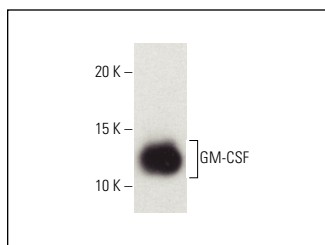
Suitable for use as control antibody for GM-CSF siRNA (h): sc-39391, GM-CSF siRNA (m): sc-39392, GM-CSF shRNA Plasmid (h): sc-39391-SH, GM-CSF shRNA Plasmid (m): sc-39392-SH, GM-CSF shRNA (h) Lentiviral Particles: sc-39391-V and GM-CSF shRNA (m) Lentiviral Particles: sc-39392-V.

Molecular Weight of GM-CSF: 14 kDa.

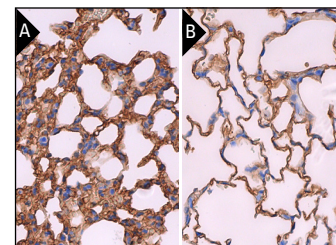
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



GM-CSF (B6-2-hGMCSF): sc-32753. Western blot analysis of human recombinant GM-CSF.



GM-CSF (B6-2-hGMCSF): sc-32753. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lung tissue showing membrane and cytoplasmic staining of pneumocytes and membrane staining of macrophages (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat lung tissue showing membrane and cytoplasmic staining of pneumocytes (B).

## SELECT PRODUCT CITATIONS

- Hellerstein, M., et al. 2012. Co-expression of HIV-1 virus-like particles and granulocyte-macrophage colony stimulating factor by GEO-D03 DNA vaccine. *Hum. Vaccin. Immunother.* 8: 1654-1658.
- Wagai, S., et al. 2019. UNC93B1 promotes tumoral growth by controlling the secretion level of granulocyte macrophage colony-stimulating factor in human oral cancer. *Biochem. Biophys. Res. Commun.* 513: 81-87.
- Xiang, X., et al. 2022. GM-CSF-miRNA-Jak2/Stat3 signaling mediates chemotherapy-induced cancer cell stemness in gastric cancer. *Front. Pharmacol.* 13: 855351.
- He, Y., et al. 2022. IL20RB mediates tumoral response to osteoclastic niches and promotes bone metastasis of lung cancer. *J. Clin. Invest.* 132: e157917.

## STORAGE

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

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