SANTA CRUZ BIOTECHNOLOGY, INC.

GM-CSF (C-20): sc-1319

BACKGROUND

Colony stimulating factors (CSFs) were initially characterized by their ability to stimulate *in vitro* colony formation by hematopoietic progenitor cells in semisolid 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.
6. Freund, M., et al. 1992. The role of GM-CSF in infection. Infection 2: 84-92.
7. Costello, R.T. 1993. Therapeutic use of granulocyte-macrophage colony-stimulating factor (GM-CSF). A review of recent experience. Acta Oncol. 32: 403-408.
8. Nahas, N., et al. 1996. Granulocyte-macrophage colony-stimulating factor (GM-CSF) promotes phosphorylation and an increase in the activity of cytosolic phospholipase A_2 in human neutrophils. Biochem. J. 313: 503-508.

CHROMOSOMAL LOCATION

Genetic locus: CSF2 (human) mapping to 5q31.1.

SOURCE

GM-CSF (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GM-CSF of human origin.

STORAGE

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

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-1319 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GM-CSF (C-20) is recommended for detection of GM-CSF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) 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.

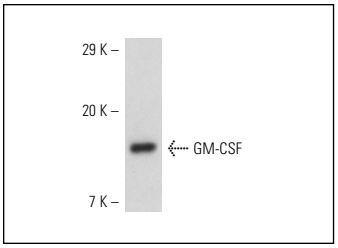
Molecular Weight of GM-CSF: 14 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

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.

DATA



GM-CSF (C-20): sc-1319. Western blot analysis of human recombinant GM-CSF.

SELECT PRODUCT CITATIONS

1. Ratto, A., et al. 2012. Goat anti-human GM-CSF recognizes canine GM-CSF. Vet. Clin. Pathol. 41: 3-4.

RESEARCH USE

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