SANTA CRUZ BIOTECHNOLOGY, INC.

MIG (ZZ-6): sc-74227

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

MIG (monokine induced by interferon-γ), also designated chemokine (C-X-C motif) ligand 9 (CXCL9), CMK, humig, SCYB9 or crg-10, is a secreted C-X-C chemokine ligand involved in T cell trafficking; it can inhibit angiogenesis and displays thymus-dependent anti-tumor effects. Human carcinoma line HSC-2 expresses MIG mRNA in response to IFN-γ, whereas Ca9-22 and the glioma line A172 do not appear to express MIG mRNA. Elevation of serum MIG and CXCL10 in ocular sarcoidosis correlates with ocular disease activity and ACE (angiotensin converting enzyme) levels. The $G_{\alpha i}$ protein-coupled receptor CXCR3 can bind MIG released from intestinal epithelium. MIG can block platelet activating factor (PAF)- or leukotriene B4 (LTB4)-induced responses and can inhibit eotaxin-induced filamentous Actin (F-Actin) formation and chemoattraction. MIG is one of many chemokines that belong to a group of small, mostly basic, structurally related molecules that regulate cell trafficking of various types of leukocytes through interactions with a subset of seven transmembrane, G protein-coupled receptors.

REFERENCES

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3. Wang, Y.Q., et al. 2003. Expression of the MIG (CXCL9) gene in murine lung carcinoma cells generated angiogenesis-independent antitumor effects. Oncol. Rep. 10: 909-913.

4. Hiroi, M., et al. 2003. Constitutive nuclear factor κB activity is required to elicit interferon-γ-induced expression of chemokine CXC ligand 9 (CXCL9) and CXCL10 in human tumour cell lines. Biochem. J. 376: 393-402.

5. Belperio, J.A., et al. 2003. Role of CXCL9/CXCR3 chemokine biology during pathogenesis of acute lung allograft rejection. J. Immunol. 171: 4844-4852.

6. Fulkerson, P.C., et al. 2004. Negative regulation of eosinophil recruitment to the lung by the chemokine monokine induced by IFN-γ (MIG, CXCL9). Proc. Natl. Acad. Sci. USA 101: 1987-1992.

7. Mitsuhashi, N., et al. 2004. Identification, functional analysis and expression in a heterotopic heart transplant model of CXCL9 in the rat. Immunology 112: 87-93.

8. Fulkerson, P.C., et al. 2005. CXCL9 inhibits eosinophil responses by a CCR3- and Rac2-dependent mechanism. Blood 106: 436-443.

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CHROMOSOMAL LOCATION

Genetic locus: CXCL9 (human) mapping to 4q21.1.

SOURCE

MIG (ZZ-6) is a mouse monoclonal antibody raised against full length recombinant MIG of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

MIG (ZZ-6) is recommended for detection of MIG of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1×10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MIG siRNA (h): sc-39361, MIG shRNA Plasmid (h): sc-39361-SH and MIG shRNA (h) Lentiviral Particles: sc-39361-V.

Molecular Weight of MIG: 8-10 kDa.

DATA
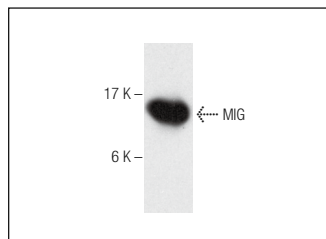
MIG (ZZ-6): sc-74227. Western blot analysis of human recombinant MIG.

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.

PROTOCOLS

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