SANTA CRUZ BIOTECHNOLOGY, INC.

MGA (K-14): sc-165015

BACKGROUND

Myc regulation of cell proliferation and differentiation involves a family of related transcription factors. One such factor, Max, is an obligate heterodimeric partner for Myc and can also form heterodimers with proteins of the Mad family (Mad 1, Mxi1, Mad 3, Mad 4, Mnt and MGA). These dimers bind to the E-box sequence CACGTG in order to regulate cell growth, proliferation and apoptosis. MGA (Max gene associated), also known as MAD5 or MXD5 (Max dimerization protein 5), is a distinct member of the Mad family. Unlike Myc, Mad and Mnt proteins, MGA contains a Myc-like bHLHZip motif and a T-box DNA-binding domain. This suggests that MGA is capable of regulating the transcription of both Max-network and T-box target genes. In addition, MGA can function as both a transcriptional repressor and transcriptional activator. MGA is a widely expressed protein and a putative Myc oncoprotein antagonist.

REFERENCES

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2. Grandori, C., Cowley, S.M., James, L.P. and Eisenman, R.N. 2001. The Myc/Max/Mad network and the transcriptional control of cell behavior. Annu. Rev. Cell Dev. Biol. 16: 653-699.
3. Ogawa, H., Ishiguro, K., Gaubatz, S., Livingston, D.M. and Nakatani, Y. 2002. A complex with chromatin modifiers that occupies E2F- and Myc-responsive genes in G_0 cells. Science 296: 1132-1136.
4. Ansieau, S. and Leutz, A. 2002. The conserved Mynd domain of BS69 binds cellular and oncoviral proteins through a common PXLXP motif. J. Biol. Chem. 277: 4906-4910.
5. Lardelli, M. 2003. The evolutionary relationships of zebrafish genes tbx6, tbx16/spadetail and mga. Dev. Genes Evol. 213: 519-522.
6. Hurlin, P.J. and Huang, J. 2006. The Max-interacting transcription factor network. Semin. Cancer Biol. 16: 265-274.
7. Rottmann, S. and Lüscher, B. 2006. The Mad side of the Max network: antagonizing the function of Myc and more. Curr. Top. Microbiol. Immunol. 302: 63-122.

CHROMOSOMAL LOCATION

Genetic locus: MGA (human) mapping to 15q14; Mga (mouse) mapping to 2 E5.

SOURCE

MGA (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MGA 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.

Blocking peptide available for competition studies, sc-165015 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MGA (K-14) is recommended for detection of MGA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 MGA siRNA (h): sc-89945, MGA siRNA (m): sc-149414, MGA shRNA Plasmid (h): sc-89945-SH, MGA shRNA Plasmid (m): sc-149414-SH, MGA shRNA (h) Lentiviral Particles: sc-89945-V and MGA shRNA (m) Lentiviral Particles: sc-149414-V.

Molecular Weight of MGA: 333 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) 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.

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 or our catalog for detailed protocols and support products.