SANTA CRUZ BIOTECHNOLOGY, INC.

MRG1 (JA22): sc-21795

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MRG1 (MSG1-related gene 1) is a primary response gene that shares substantial sequence similarity to the carboxy-terminal region of MSG1 (melanocyte-specific gene-1). Both MRG1 and MSG1 contain two conserved domains designated CR1 and CR2, the latter of which is required for transcriptional activation, and they appear to represent a unique family of transcription factors. MRG1 expression is induced by cytokines, including IL-1α, IL-9 and GM-CSF, as well as by serum growth factors, and it is regulated by the JAK/Stat pathway. Overexpression of MRG1 induces anchorage-independent growth in soft agar, loss of cell contact inhibition and tumor formation in nude mice, suggesting that MRG1 is a transforming gene with oncogenic properties. A splice variant of MRG1, designated p35srj, is ubiquitously expressed and interacts with the p300-CH1 domain of p300/CBP, where it inhibits the interaction of p300/CBP with hypoxia-inducible factor-1α (HIF-1α) to prevent HIF-1 transactivation.

REFERENCES

1. Shioda, T., et al. 1996. MSG1, a novel melanocyte-specific gene, encodes a nuclear protein and is associated with pigmentation. Proc. Natl. Acad. Sci. USA 93: 12298-12303.
2. Shioda, T., et al. 1997. MSG1 and its related protein MRG1 share a transcription activating domain. Gene 204: 235-241.
3. Sun, H.B., et al. 1998. MRG1, the product of a melanocyte-specific gene related gene, is a cytokine-inducible transcription factor with transformation activity. Proc. Natl. Acad. Sci. USA 95: 13555-13560.

CHROMOSOMAL LOCATION

Genetic locus: CITED2 (human) mapping to 6q24.1; Cited2 (mouse) mapping to 10 A2.

SOURCE

MRG1 (JA22) is a mouse monoclonal antibody raised against amino acids 66-270 of human MRG1, requires amino acids 66-124 for recognition.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-21795 X, 200 µg/0.1 ml.

MRG1 (JA22) is available conjugated to agarose (sc-21795 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-21795 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-21795 PE), fluorescein (sc-21795 FITC), Alexa Fluor® 488 (sc-21795 AF488), Alexa Fluor® 546 (sc-21795 AF546), Alexa Fluor® 594 (sc-21795 AF594) or Alexa Fluor® 647 (sc-21795 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-21795 AF680) or Alexa Fluor® 790 (sc-21795 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

MRG1 (JA22) is recommended for detection of MRG1 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).

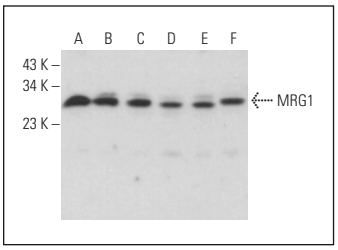
Suitable for use as control antibody for MRG1 siRNA (h): sc-35959, MRG1 siRNA (m): sc-35960, MRG1 shRNA Plasmid (h): sc-35959-SH, MRG1 shRNA Plasmid (m): sc-35960-SH, MRG1 shRNA (h) Lentiviral Particles: sc-35959-V and MRG1 shRNA (m) Lentiviral Particles: sc-35960-V.

MRG1 (JA22) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

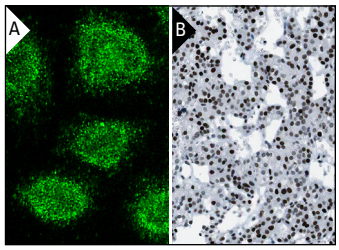
Molecular Weight of MRG1: 24/27 kDa.

Positive Controls: F9 cell lysate: sc-2245, A-375 cell lysate: sc-3811 or Hep G2 cell lysate: sc-2227.

DATA



MRG1 (JA22): sc-21795. Western blot analysis of MRG1 expression in Jurkat nuclear extract (**A**) and A-375 (**B**), Hep G2 (**C**), PC-12 (**D**), F9 (**E**) and SK-MEL-24 (**F**) whole cell lysates.



MRG1 (JA22): sc-21795. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing nuclear staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Chou, Y.T., et al. 2006. Cited2 modulates TGF-β-mediated upregulation of MMP9. Oncogene 25: 5547-5560.
2. Chang, P.Y., et al. 2014. EBV-encoded LMP-1 sensitizes nasopharyngeal carcinoma cells to genotoxic drugs by down-regulating Cabin1 expression. J. Cell. Physiol. 229: 309-322.
3. Saito, Y., et al. 2015. High-throughput siRNA screening to reveal GATA-2 upstream transcriptional mechanisms in hematopoietic cells. PLoS ONE 10: e0137079.
4. Liu, L., et al. 2019. Cited2 mediates the mechanical loading-induced suppression of adipokines in the infrapatellar fat pad. Ann. N.Y. Acad. Sci. 1442: 153-164.

STORAGE

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