SANTA CRUZ BIOTECHNOLOGY, INC.

# MRG1 (H-220): sc-25375

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-1$\alpha$, 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-1$\alpha$ (HIF-1$\alpha$) to prevent HIF-1 transactivation.

## REFERENCES


1. Shioda, T., Fenner, M.H. and Isselbacher, K.J. 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., Fenner, M.H. and Isselbacher, K.J. 1997. MSG1 and its related protein MRG1 share a transcription activating domain. Gene 204: 235-241.
3. Sun, H.B., Zhu, Y.X., Yin, T., Sledge, G. and Yang, Y.C. 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 (H-220) is a rabbit polyclonal antibody raised against amino acids 1-130 of MRG1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-25375 X, 200 µg/0.1 ml.

## 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.

## APPLICATIONS

MRG1 (H-220) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MRG1 (H-220) is also recommended for detection of MRG1 in additional species, including equine, canine, bovine and porcine.

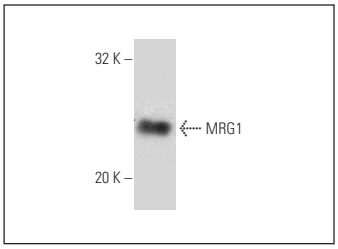
Suitable for use as control antibody for MRG1 siRNA (h): sc-35959, MRG1 siRNA (m): sc-35960, MRG1 shRNA Plasmid (h): sc-35959-SH, MRG1 shRNA Plasmid (m): sc-35960-SH, MRG1 shRNA (h) Lentiviral Particles: sc-35959-V and MRG1 shRNA (m) Lentiviral Particles: sc-35960-V.

MRG1 (H-220) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

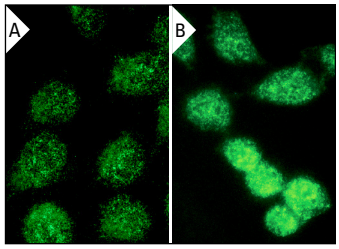
Molecular Weight of MRG1: 24/27 kDa.

Positive Controls: HeLa + IL-6 cell lysate: sc-24687, C32 nuclear extract: sc-2136 or IMR-32 cell lysate: sc-2409.

## DATA




MRG1 (H-220): sc-25375. Western blot analysis of MRG1 expression in C32 nuclear extract.




MRG1 (H-220): sc-25375. Immunofluorescense staining of methanol-fixed HeLa cells showing weak nuclear (**A**) and strong nuclear localization after IL-6 induction (**B**).

## SELECT PRODUCT CITATIONS


1. Daino, K., Roch-Lefevre, S., Ugolin, N., Altmeyer-Morel, S., Guilly, M.N. and Chevillard, S. 2009. Silencing of Cited2 and Akap12 genes in radiation-induced rat osteosarcomas. Biochem. Biophys. Res. Commun. 390: 654-658.
2. Chen, Y., Carlson, E.C., Chen, Z.Y, Hamik, A., Jain, M.K., Dunwoodie, S.L., Yang, Y.C. 2009. Conditional deletion of Cited2 results in defective corneal epithelial morphogenesis and maintenance. Dev. Biol. 334: 243-252.