

MRGBP (Q-18): sc-85767

BACKGROUND

In the nucleosomes of eukaryotic chromatin, DNA is wound around a class of proteins known as histones. Posttranslational modification of histones alters interaction with the DNA molecule. This interaction plays a major role in regulation of transcription, DNA repair and chromosome condensation. There are two copies each of four core histones (H2A, H2B, H3 and H4) within the nucleosome. MRGBP (MRG-binding protein), also known as C20orf20, is a 204 amino acid protein which is a part of the NuA4 histone acetyltransferase (HAT) complex that acts to acetylate histone H2A and H4. The NuA4 histone acetyltransferase complex is a nuclear enzyme that contains the catalytic subunit HTATIP/TIP60. MRGBP has potential to interact with MORF4L1/MRG15 and MORF4L2/MRGX. Human MRGBP contains two phosphoserine residues at position 191 and 195.

REFERENCES

1. Park, J., Kunjibettu, S., McMahon, S.B. and Cole, M.D. 2001. The ATM-related domain of TRRAP is required for histone acetyltransferase recruitment and Myc-dependent oncogenesis. *Genes Dev.* 15: 1619-1624.
2. Cai, Y., Jin, J., Tomomori-Sato, C., Sato, S., Sorokina, I., Parmely, T.J., Conaway, R.C. and Conaway, J.W. 2003. Identification of new subunits of the multiprotein mammalian TRRAP/TIP60-containing histone acetyltransferase complex. *J. Biol. Chem.* 278: 42733-42736.
3. Doyon, Y., Selleck, W., Lane, W.S., Tan, S. and Côte, J. 2004. Structural and functional conservation of the NuA4 histone acetyltransferase complex from yeast to humans. *Mol. Cell. Biol.* 24: 1884-1896.
4. Cai, Y., Jin, J., Florens, L., Swanson, S.K., Kusch, T., Li, B., Workman, J.L., Washburn, M.P., Conaway, R.C. and Conaway, J.W. 2005. The mammalian YL1 protein is a shared subunit of the TRRAP/TIP60 histone acetyltransferase and SRCAP complexes. *J. Biol. Chem.* 280: 13665-13670.
5. Squatrito, M., Gorrini, C. and Amati, B. 2006. TIP60 in DNA damage response and growth control: many tricks in one HAT. *Trends Cell Biol.* 16: 433-442.
6. Dephoure, N., Zhou, C., Villen, J., Beausoleil, S.A., Bakalarski, C.E., Elledge, S.J. and Gygi, S.P. 2008. A quantitative atlas of mitotic phosphorylation. *Proc. Natl. Acad. Sci. USA* 105: 10762-10767.

CHROMOSOMAL LOCATION

Genetic locus: C20orf20 (human) mapping to 20q13.33; 1600027N09Rik (mouse) mapping to 2 H4.

SOURCE

MRGBP (Q-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of MRGBP of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85767 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRGBP (Q-18) is recommended for detection of MRGBP 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).

MRGBP (Q-18) is also recommended for detection of MRGBP in additional species, including equine, bovine and avian.

Suitable for use as control antibody for MRGBP siRNA (h): sc-75822, MRGBP siRNA (m): sc-149568, MRGBP shRNA Plasmid (h): sc-75822-SH, MRGBP shRNA Plasmid (m): sc-149568-SH, MRGBP shRNA (h) Lentiviral Particles: sc-75822-V and MRGBP shRNA (m) Lentiviral Particles: sc-149568-V.

Molecular Weight of MRGBP: 22 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.