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- Gefahrgutzuschlag
- Expressversand

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# MRGBP siRNA (m): sc-149568

## BACKGROUND

In the nucleosomes of eukaryotic chromatin, DNA is wound around a class of proteins known as histones. Post-translational 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

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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: MrGBP (mouse) mapping to 2 H4.

## PRODUCT

MRGBP siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MRGBP shRNA Plasmid (m): sc-149568-SH and MRGBP shRNA (m) Lentiviral Particles: sc-149568-V as alternate gene silencing products.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

MRGBP siRNA (m) is recommended for the inhibition of MRGBP expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MRGBP gene expression knockdown using RT-PCR Primer: MRGBP (m)-PR: sc-149568-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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