

# hnRNP A/B siRNA (m): sc-75272

## BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to pre-mRNA processing and transport, and also bind heterogeneous nuclear RNA (hnRNA), which are the transcripts produced by RNA polymerase II. The hnRNPs are associated with pre-mRNAs in the nucleus and appear to influence pre-mRNA processing and other aspects of mRNA metabolism and transport. hnRNP A/B (heterogeneous nuclear ribonucleoprotein A/B), also known as HNRNPAB, ABBP1 or HNRPAB, is a 332 amino acid nuclear protein that is ubiquitously expressed. hnRNP A/B binds single-stranded RNA and has a high affinity for G-rich and U-rich regions of hnRNA. hnRNP A/B contains two RRM (RNA recognition motif) domains and interacts with APOBEC1 (apolipoprotein B mRNA editing enzyme complex-1).

## REFERENCES

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2. Lau, P.P., et al. 1997. Cloning of an Apobec-1-binding protein that also interacts with apolipoprotein B mRNA and evidence for its involvement in RNA editing. *J. Biol. Chem.* 272: 1452-1455.
3. Plomaritoglou, A., et al. 2000. Molecular characterization of a murine, major A/B type hnRNP protein: mBx. *Biochim. Biophys. Acta* 1490: 54-62.
4. Fomenkov, A., et al. 2003. P63  $\alpha$  mutations lead to aberrant splicing of keratinocyte growth factor receptor in the Hay-Wells syndrome. *J. Biol. Chem.* 278: 23906-23914.
5. Gao, C., et al. 2004. S-nitrosylation of heterogeneous nuclear ribonucleoprotein A/B regulates osteopontin transcription in endotoxin-stimulated murine macrophages. *J. Biol. Chem.* 279: 11236-11243.
6. Zhao, S., et al. 2008. Heterogeneous nuclear ribonucleoprotein A/B and G inhibits the transcription of gonadotropin-releasing-hormone 1. *Mol. Cell. Neurosci.* 37: 69-84.
7. He, Y., et al. 2009. Nuclear functions of heterogeneous nuclear ribonucleoproteins A/B. *Cell. Mol. Life Sci.* 66: 1239-1256.

## CHROMOSOMAL LOCATION

Genetic locus: Hnrnpab (mouse) mapping to 11 B1.3.

## PRODUCT

hnRNP A/B siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs 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 hnRNP A/B shRNA Plasmid (m): sc-75272-SH and hnRNP A/B shRNA (m) Lentiviral Particles: sc-75272-V as alternate gene silencing products.

For independent verification of hnRNP A/B (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75272A, sc-75272B and sc-75272C.

## RESEARCH USE

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

## 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

hnRNP A/B siRNA (m) is recommended for the inhibition of hnRNP A/B 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.

## GENE EXPRESSION MONITORING

hnRNP A/B (G-12): sc-390957 is recommended as a control antibody for monitoring of hnRNP A/B gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor hnRNP A/B gene expression knockdown using RT-PCR Primer: hnRNP A/B (m)-PR: sc-75272-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

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