SANTA CRUZ BIOTECHNOLOGY, INC.

MIBP siRNA (h): sc-97715

BACKGROUND

MIBP (muscle integrin-binding protein), also known as NRK 2 (nicotinamide riboside kinase 2), integrin β-1-binding protein 3 or RNK 2 (ribosylnicotinamide kinase 2), is a 230 amino acid protein that belongs to the uridine kinase family and NRK subfamily. Highly expressed in skeletal muscle, MIBP is found at lower levels in heart and is downregulated during myoblast differentiation. MIBP catalyzes the phosphorylation of nicotinic acid riboside and nicotinamide riboside to form nicotinic acid mononucleotide and nicotinamide mononucleotide. Existing as a monomer, MIBP forms two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 19p13.3.

REFERENCES

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3. Battle, M.A., Maher, V.M. and McCormick, J.J. 2003. ST7 is a novel low-density lipoprotein receptor-related protein (LRP) with a cytoplasmic tail that interacts with proteins related to signal transduction pathways. Biochemistry 42: 7270-7282.
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5. Bieganowski, P. and Brenner, C. 2004. Discoveries of nicotinamide riboside as a nutrient and conserved NRK genes establish a Preiss-Handler independent route to NAD^+ in fungi and humans. Cell 117: 495-502.
6. Tempel, W., Rabeh, W.M., Bogan, K.L., Belenky, P., Wojcik, M., Seidle, H.F., Nedyalkova, L., Yang, T., Sauve, A.A., Park, H.W. and Brenner, C. 2007. Nicotinamide riboside kinase structures reveal new pathways to NAD^+. PLoS Biol. 5: e263.

CHROMOSOMAL LOCATION

Genetic locus: NMRK2 (human) mapping to 19p13.3.

PRODUCT

MIBP siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MIBP shRNA Plasmid (h): sc-97715-SH and MIBP shRNA (h) Lentiviral Particles: sc-97715-V as alternate gene silencing products.

PROTOCOLS

See our web site at 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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

MIBP siRNA (h) is recommended for the inhibition of MIBP expression in human 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 µM in 66 µl. 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 MIBP gene expression knockdown using RT-PCR Primer: MIBP (h)-PR: sc-97715-PR (20 µl). 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.