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IGHMBP2 siRNA (m): sc-146184

BACKGROUND

IGHMBP2 (immunoglobulin μ binding protein 2), is also known as HCSA, HMN6, CATF1, SMARD1 or SMUBP2, is a 993 amino acid nuclear and cytoplasmic protein that is ubiquitously expressed. Belonging to the DNA2/NAM7 helicase family, IGHMBP2 is a 5' to 3' helicase that unwinds RNA and DNA duplexes in an ATP-dependent reaction. IGHMBP2 also acts as a transcriptional regulator and is necessary for transcriptional activation of the flounder liver-type antifreeze protein gene. IGHMBP2 exists as a homooligomer and is part of the cytosolic ribonucleoprotein complex. Mutations in the gene encoding IGHMBP2 are suggested to lead to distal hereditary motor neuropathy type 6 (HMN6), also known as spinal muscular atrophy distal autosomal recessive 1 (DSMA1) or spinal muscular atrophy with respiratory distress 1 (SMARD1). HMN6 is characterized by weakness and wasting of distal muscles of the anterior tibial and peroneal compartments of the legs and severe respiratory distress.

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CHROMOSOMAL LOCATION

Genetic locus: Ighmbp2 (mouse) mapping to 19 A.

PRODUCT

IGHMBP2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see IGHMBP2 shRNA Plasmid (m): sc-146184-SH and IGHMBP2 shRNA (m) Lentiviral Particles: sc-146184-V as alternate gene silencing products.

For independent verification of IGHMBP2 (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-146184A, sc-146184B and sc-146184C.

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

APPLICATIONS

IGHMBP2 siRNA (m) is recommended for the inhibition of IGHMBP2 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 μ M in 66 μ 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 IGHMBP2 gene expression knockdown using RT-PCR Primer: IGHMBP2 (m)-PR: sc-146184-PR (20 μ 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.