

IGF2BP2 siRNA (h): sc-78065

BACKGROUND

IGF2BP2 (Insulin-like growth factor 2 mRNA binding protein 2) is also known as IGF2 mRNA-binding protein 2, IMP-2 (IGF-II mRNA-binding protein 2), VICKZ family member 2 or hepatocellular carcinoma autoantigen p62 and is a 556 amino acid protein. IGF2BP2 is expressed in a variety of tissues including heart, placenta, skeletal muscle, pancreas, fetal liver, lung, kidney, thymus and gonadal cells. IGF2BP2 is an RNA binding protein which may be involved in the regulation of mRNA translation and may also function to control the spatial localization of target mRNAs. Antibodies against IGF2BP2 have been detected in patients with HCC (hepatocellular carcinoma), suggesting that IGF2BP2 may have a role in the pathogenesis of HCC. Defects in IGF2BP2 are thought to be associated with susceptibility to type 2 diabetes mellitus.

REFERENCES

1. Zhang, J.Y., et al. 1999. A novel cytoplasmic protein with RNA-binding motifs is an autoantigen in human hepatocellular carcinoma. *J. Exp. Med.* 189: 1101-1110.
2. Nielsen, J., et al. 1999. A family of Insulin-like growth factor II mRNA-binding proteins represses translation in late development. *Mol. Cell. Biol.* 19: 1262-1270.
3. Brants, J.R., et al. 2004. Differential regulation of the Insulin-like growth factor II mRNA-binding protein genes by architectural transcription factor HMGA2. *FEBS Lett.* 569: 277-283.
4. Yisraeli, J.K. 2005. VICKZ proteins: a multi-talented family of regulatory RNA-binding proteins. *Biol. Cell* 97: 87-96.

CHROMOSOMAL LOCATION

Genetic locus: IGF2BP2 (human) mapping to 3q27.2.

PRODUCT

IGF2BP2 siRNA (h) 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 IGF2BP2 shRNA Plasmid (h): sc-78065-SH and IGF2BP2 shRNA (h) Lentiviral Particles: sc-78065-V as alternate gene silencing products.

For independent verification of IGF2BP2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-78065A, sc-78065B and sc-78065C.

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

IGF2BP2 siRNA (h) is recommended for the inhibition of IGF2BP2 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 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.

GENE EXPRESSION MONITORING

IGF2BP2 (F-12): sc-377014 is recommended as a control antibody for monitoring of IGF2BP2 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 κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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 IGF2BP2 gene expression knockdown using RT-PCR Primer: IGF2BP2 (h)-PR: sc-78065-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Mao, J., et al. 2021. LncRNA HCG11 mediated by METTL14 inhibits the growth of lung adenocarcinoma via IGF2BP2/LATS1. *Biochem. Biophys. Res. Commun.* 580: 74-80.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.