SANTA CRUZ BIOTECHNOLOGY, INC.

FNBP2 siRNA (h): sc-88206

BACKGROUND

FNBP2 (formin binding protein 2), also known as SRGAP3, ARHGAP34 or SRGAP2 (SLIT-ROBO Rho GTPase activating protein 2), is a 1,071 amino acid protein that is expressed at at low levels in placenta, kidney and ovary. Containing a FCH (Fps/Fes/Fer/CIP4 homology) domain, a Rho-GAP domain and a SH3 (Src homology 3) domain, FNBP2 is considered a putative GTPase-activating protein for Rho family small GTPases. Rho GTPases are molecular switches that regulate many essential cellular processes, including Actin dynamics, cell adhesion, cell-cycle progression and transcription. The FNBP2 family includes such proteins as SRGAP1, WRP (WAVE-associated Rac GTPase-activating protein) and ARHGAP4, which are characterized by FCH, FBH, RhoGAP and SH3 domains, and may have a part in cell migration and axon guidance.

REFERENCES

1. Chan, D.C., Bedford, M.T. and Leder, P. 1996. Formin binding proteins bear WWP/WW domains that bind proline-rich peptides and functionally resemble SH3 domains. EMBO J. 15: 1045-1054.
2. Wong, K., Ren, X.R., Huang, Y.Z., Xie, Y., Liu, G., Saito, H., Tang, H., Wen, L., Brady-Kalnay, S.M., Mei, L., Wu, J.Y., Xiong, W.C. and Rao, Y. 2001. Signal transduction in neuronal migration: roles of GTPase activating proteins and the small GTPase Cdc42 in the Slit-Robo pathway. Cell 107: 209-221.
3. Katoh, M. and Katoh, M. 2003. FNBP2 gene on human chromosome 1q32.1 encodes ARHGAP family protein with FCH, FBH, RhoGAP and SH3 domains. Int. J. Mol. Med. 11: 791-797.
4. Katoh, M. and Katoh, M. 2004. Identification and characterization of human FCHSD1 and FCHSD2 genes in silico. Int. J. Mol. Med. 13: 749-754.
5. Katoh, M. and Katoh, M. 2004. Identification and characterization of the human FMN1 gene in silico. Int. J. Mol. Med. 14: 121-126.
6. Katoh, M. and Katoh, M. 2004. Identification and characterization of human FCHO2 and mouse Fcho2 genes in silico. Int. J. Mol. Med. 14: 327-331.
7. Katoh, M. and Katoh, M. 2004. Characterization of FMN2 gene at human chromosome 1q43. Int. J. Mol. Med. 14: 469-474.

CHROMOSOMAL LOCATION

Genetic locus: SRGAP2 (human) mapping to 1q32.1.

PRODUCT

FNBP2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FNBP2 shRNA Plasmid (h): sc-88206-SH and FNBP2 shRNA (h) Lentiviral Particles: sc-88206-V as alternate gene silencing products.

For independent verification of FNBP2 (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-88206A, sc-88206B and sc-88206C.

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

FNBP2 siRNA (h) is recommended for the inhibition of FNBP2 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.

GENE EXPRESSION MONITORING

FNBP2 (G-10): sc-398399 is recommended as a control antibody for monitoring of FNBP2 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 FNBP2 gene expression knockdown using RT-PCR Primer: FNBP2 (h)-PR: sc-88206-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.

PROTOCOLS

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