

UBCE7IP4 siRNA (m): sc-154845

BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). UBCE7IP4 (ubiquitin-conjugating enzyme 7-interacting protein 4), also known as RNF144A (RING finger protein 144A), KIAA0161 or RNF144, is a 292 amino acid single-pass membrane protein that contains one RING-type zinc finger and two IBR-type zinc fingers. Functioning as an E3 ubiquitin-protein ligase, UBCE7IP4 accepts ubiquitin (in the form of a thioester) from E2 ubiquitin-conjugating enzymes, such as UBC8 and UBCH7, and transfers that ubiquitin residue to target substrates. Via its RING finger, UBCE7IP4 may play a role in protein-DNA and protein-protein interactions throughout the cell.

REFERENCES

1. Borden, K.L. and Freemont, P.S. 1996. The RING finger domain: a recent example of a sequence-structure family. *Curr. Opin. Struct. Biol.* 6: 395-401.
2. Nagase, T., Seki, N., Ishikawa, K., Tanaka, A. and Nomura, N. 1996. Prediction of the coding sequences of unidentified human genes. V. The coding sequences of 40 new genes (KIAA0161-KIAA0200) deduced by analysis of cDNA clones from human cell line KG-1. *DNA Res.* 3: 17-24.
3. Martinez-Noel, G., Niedenthal, R., Tamura, T. and Harbers, K. 1999. A family of structurally related RING finger proteins interacts specifically with the ubiquitin-conjugating enzyme UbcM4. *FEBS Lett.* 454: 257-261.
4. Lorick, K.L., Jensen, J.P., Fang, S., Ong, A.M., Hatakeyama, S. and Weissman, A.M. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. *Proc. Natl. Acad. Sci. USA* 96: 11364-11369.
5. Hoja, M.R., Wahlestedt, C. and Höög, C. 2000. A visual intracellular classification strategy for uncharacterized human proteins. *Exp. Cell Res.* 259: 239-246.

CHROMOSOMAL LOCATION

Genetic locus: Rnf144a (mouse) mapping to 12 A2.

PRODUCT

UBCE7IP4 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 UBCE7IP4 shRNA Plasmid (m): sc-154845-SH and UBCE7IP4 shRNA (m) Lentiviral Particles: sc-154845-V as alternate gene silencing products.

For independent verification of UBCE7IP4 (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-154845A, sc-154845B and sc-154845C.

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 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

UBCE7IP4 siRNA (m) is recommended for the inhibition of UBCE7IP4 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.

GENE EXPRESSION MONITORING

UBCE7IP4 (F-2): sc-393432 is recommended as a control antibody for monitoring of UBCE7IP4 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 UBCE7IP4 gene expression knockdown using RT-PCR Primer: UBCE7IP4 (m)-PR: sc-154845-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.