

UIP1 siRNA (h): sc-91088

BACKGROUND

UIP1 (UCHL5-interacting protein, HAUS augmin-like complex subunit 7) is a 368 amino acid product of the human HAUS7 gene. UIP1 is subunit 7 of the HAUS augmin-like complex, which is involved with regulation of spindle assembly during mitosis and contributes to the integrity of the centrosome. The HAUS augmin-like complex associates with the γ -tubulin ring complex. This interaction is required for spindle assembly. UIP1 also binds to UCHL5 (ubiquitin carboxyl-terminal hydrolase isozyme L5) which is a protease that specifically cleaves "Lys-48"-linked polyubiquitin chains. UIP1 localizes to the centrosome during interphase and becomes part of the spindle microtubules during mitosis. Detectable levels of expression have been found in spleen, thymus, testis, ovary, small intestine and colon tissues.

REFERENCES

- Esposito, T., et al. 1997. Expressed STSs and transcription of human Xq28. *Gene* 187: 185-191.
- Li, T., et al. 2001. Identification of two proteins, S14 and UIP1, that interact with UCH37. *FEBS Lett.* 488: 201-205.
- Wang, B., et al. 2008. Evaluation of the low-specificity protease elastase for large-scale phosphoproteome analysis. *Anal. Chem.* 80: 9526-9533.
- Dephoure, N., et al. 2008. A quantitative atlas of mitotic phosphorylation. *Proc. Natl. Acad. Sci. USA* 105: 10762-10767.
- Lawo, S., et al. 2009. HAUS, the 8-subunit human augmin complex, regulates centrosome and spindle integrity. *Curr. Biol.* 19: 816-826.
- Uehara, R., et al. 2009. The augmin complex plays a critical role in spindle microtubule generation for mitotic progression and cytokinesis in human cells. *Proc. Natl. Acad. Sci. USA* 106: 6998-7003.
- Mayya, V., et al. 2009. Quantitative phosphoproteomic analysis of T cell receptor signaling reveals system-wide modulation of protein-protein interactions. *Sci. Signal.* 2: ra46.

CHROMOSOMAL LOCATION

Genetic locus: HAUS7 (human) mapping to Xq28.

PRODUCT

UIP1 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 UIP1 shRNA Plasmid (h): sc-91088-SH and UIP1 shRNA (h) Lentiviral Particles: sc-91088-V as alternate gene silencing products.

For independent verification of UIP1 (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-91088A, sc-91088B and sc-91088C.

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

UIP1 siRNA (h) is recommended for the inhibition of UIP1 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

UIP1 (C-2): sc-393259 is recommended as a control antibody for monitoring of UIP1 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 UIP1 gene expression knockdown using RT-PCR Primer: UIP1 (h)-PR: sc-91088-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.