SANTA CRUZ BIOTECHNOLOGY, INC.

UBE2H siRNA (m): sc-106659

BACKGROUND

UBE2H (ubiquitin-conjugating enzyme E2H), also known as UBC8, UBCH, UBCH2 or E2-20K, is a 183 amino acid protein involved in ubiquitin-mediated protein degradation. 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). One of several members of the ubiquitin-conjugating enzyme family, UBE2H functions as an E2 ubiquitin-conjugating enzyme that acts to catalyze the covalent attachment of ubiquitin residues to various proteins, including Histone H2A. UBE2H shares 100% identity with its mouse counterpart and 98% identity with its frog and zebrafish homologs, suggesting a conserved function between species. Multiple isoforms of UBE2H exist due to alternative splicing events.

REFERENCES

1. Kaiser, P., Seufert, W., Höfferer, L., Kofler, B., Sachsenmaier, C., Herzog, H., Jentsch, S., Schweiger, M. and Schneider, R. 1994. A human ubiquitin-conjugating enzyme homologous to yeast UBC8. J. Biol. Chem. 269: 8797-8802.
2. Kaiser, P., Mandl, S., Schweiger, M. and Schneider, R. 1995. Characterization of functionally independent domains in the human ubiquitin conjugating enzyme UbcH2. FEBS Lett. 377: 193-196.
3. Wefes, I., Mastrandrea, L.D., Haldeman, M., Koury, S.T., Tamburlin, J., Pickart, C.M. and Finley, D. 1995. Induction of ubiquitin-conjugating enzymes during terminal erythroid differentiation. Proc. Natl. Acad. Sci. USA 92: 4982-4986.
4. Hayashida, S., Yamasaki, K., Asada, Y., Soeda, E., Niikawa, N. and Kishino, T. 2000. Construction of a physical and transcript map flanking the imprinted MEST/PEG1 region at 7q32. Genomics 66: 221-225.
5. Vourc'h, P., Martin, I., Bonnet-Brilhault, F., Marouillat, S., Barthelemy, C., Pierre Müh, J. and Andres, C. 2003. Mutation screening and association study of the UBE2H gene on chromosome 7q32 in autistic disorder. Psychiatr. Genet. 13: 221-225.

CHROMOSOMAL LOCATION

Genetic locus: Ube2h (mouse) mapping to 6 A3.3.

PRODUCT

UBE2H 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UBE2H shRNA Plasmid (m): sc-106659-SH and UBE2H shRNA (m) Lentiviral Particles: sc-106659-V as alternate gene silencing products.

For independent verification of UBE2H (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-106659A, sc-106659B and sc-106659C.

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

UBE2H siRNA (m) is recommended for the inhibition of UBE2H 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 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

UBE2H (G-2): sc-515567 is recommended as a control antibody for monitoring of UBE2H 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 UBE2H gene expression knockdown using RT-PCR Primer: UBE2H (m)-PR: sc-106659-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.