SANTA CRUZ BIOTECHNOLOGY, INC.

UBE2CBP siRNA (h): sc-95426

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). UBE2CBP (Ubiquitin-conjugating enzyme E2C-binding protein), also known as UbcH10-binding protein with a HECT-like domain, is a 389 amino acid cytoplasmic protein that functions as a E3 ubiquitin-protein ligase which accepts ubiquitin from specific E2 enzymes, then transfers it to substrates to promote their degradation. UBE2CBP uses UBE2C as its E2 enzyme. The C-terminus of UBE2CBP shows weak homology to the HECT domain. HECT E3 enzymes have been shown to play an important role in sporadic and hereditary human diseases, such as cancer, Angelman syndrome and Liddle's syndrome.

REFERENCES

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3. Beaudenon, S., Dastur, A. and Huibregtse, J.M. 2005. Expression and assay of HECT domain ligases. Meth. Enzymol. 398: 112-125.
4. Scheffner, M. and Staub, O. 2007. HECT E3s and human disease. BMC Biochem. 8: S6.
5. Kee, Y. and Huibregtse, J.M. 2007. Regulation of catalytic activities of HECT ubiquitin ligases. Biochem. Biophys. Res. Commun. 354: 329-333.
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CHROMOSOMAL LOCATION

Genetic locus: UBE3D (human) mapping to 6q14.1.

PRODUCT

UBE2CBP 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 UBE2CBP shRNA Plasmid (h): sc-95426-SH and UBE2CBP shRNA (h) Lentiviral Particles: sc-95426-V as alternate gene silencing products.

For independent verification of UBE2CBP (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-95426A, sc-95426B and sc-95426C.

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 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

UBE2CBP siRNA (h) is recommended for the inhibition of UBE2CBP 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor UBE2CBP gene expression knockdown using RT-PCR Primer: UBE2CBP (h)-PR: sc-95426-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.