SANTA CRUZ BIOTECHNOLOGY, INC.

CUEDC1 siRNA (m): sc-142633

BACKGROUND

The coupling of ubiquitin conjugation to endoplasmic reticulum (ER) degradation (CUE) domain functions as a ubiquitin (UB) binding domain that is approximately 40 amino acids in length. Present in eukaryotic proteins that are involved in ubiquitination and protein trafficking pathways, CUE domains can bind monoubiquitin and may be required for ubiquitination of the proteins in which they are found. CUEDC1 (CUE domain-containing protein 1) is a 386 amino acid protein that contains one CUE domain, suggesting a possible role in protein trafficking and degradation pathways. Defects in the gene encoding CUEDC1 may be associated with early stage cervical cancer, implicating CUEDC1 as a potential tumor marker. Two isoforms of CUEDC1 exist due to alternative splicing events.

REFERENCES

1. Ponting, C.P. 2000. Proteins of the endoplasmic-reticulum-associated degradation pathway: domain detection and function prediction. Biochem. J. 351: 527-535.
2. Prag, G., et al. 2003. Mechanism of ubiquitin recognition by the CUE domain of Vps9p. Cell 113: 609-620.
3. Kang, R.S., et al. 2003. Solution structure of a CUE-ubiquitin complex reveals a conserved mode of ubiquitin binding. Cell 113: 621-630.
4. Shih, S.C., et al. 2003. A ubiquitin-binding motif required for intramolecular monoubiquitylation, the CUE domain. EMBO J. 22: 1273-1281.
5. Colland, F., et al. 2004. Functional proteomics mapping of a human signaling pathway. Genome Res. 14: 1324-1332.

CHROMOSOMAL LOCATION

Genetic locus: Cuedc1 (mouse) mapping to 11 C.

PRODUCT

CUEDC1 siRNA (m) is a pool of 2 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 CUEDC1 shRNA Plasmid (m): sc-142633-SH and CUEDC1 shRNA (m) Lentiviral Particles: sc-142633-V as alternate gene silencing products.

For independent verification of CUEDC1 (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-142633A and sc-142633B.

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

CUEDC1 siRNA (m) is recommended for the inhibition of CUEDC1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CUEDC1 gene expression knockdown using RT-PCR Primer: CUEDC1 (m)-PR: sc-142633-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.