

# CUEDC2 siRNA (h): sc-90791

## BACKGROUND

CUEDC2 (CUE domain containing 2), also known as HOYS6, is a 287 amino acid cytoplasmic and nuclear protein that contains one CUE domain, which it utilizes to interact with both PR and ER $\alpha$ , thereby influencing their protein expression levels by marking them for proteasomal degradation. A member of the CUEDC2 family, CUEDC2 also targets IKK for inactivation by PP1 recruitment. The gene encoding CUEDC2 maps to human chromosome 10q24.32, which contains over 800 genes and 135 million nucleotides, making up nearly 4.5% of the human genome. PTEN is an important tumor suppressor gene located on chromosome 10q23.31 and, when defective, causes a genetic predisposition to cancer development known as Cowden syndrome. The chromosome 10 encoded gene ERCC6 is important for DNA repair and is linked to Cockayne syndrome which is characterized by extreme photosensitivity and premature aging. Tetrahydrobiopterin deficiency and a number of syndromes involving defective skull and facial bone fusion are also linked to chromosome 10. As with most trisomies, trisomy 10 is rare and is deleterious.

## REFERENCES

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2. Berger, P., et al. 2002. Molecular cell biology of Charcot-Marie-Tooth disease. *Neurogenetics* 4: 1-15.
3. Teresi, R.E., et al. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
4. Zhang, P.J., et al. 2007. CUE domain containing 2 regulates degradation of progesterone receptor by ubiquitin-proteasome. *EMBO J.* 26: 1831-1842.
5. Li, H.Y., et al. 2008. Deactivation of the kinase IKK by CUEDC2 through recruitment of the phosphatase PP1. *Nat. Immunol.* 9: 533-541.
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## CHROMOSOMAL LOCATION

Genetic locus: CUEDC2 (human) mapping to 10q24.32.

## PRODUCT

CUEDC2 siRNA (h) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CUEDC2 shRNA Plasmid (h): sc-90791-SH and CUEDC2 shRNA (h) Lentiviral Particles: sc-90791-V as alternate gene silencing products.

For independent verification of CUEDC2 (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-90791A and sc-90791B.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

CUEDC2 siRNA (h) is recommended for the inhibition of CUEDC2 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  $\mu$ M in 66  $\mu$ 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CUEDC2 gene expression knockdown using RT-PCR Primer: CUEDC2 (h)-PR: sc-90791-PR (20  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.