

# Smarcad1 siRNA (h): sc-88856

## BACKGROUND

Smarcad1 (SWI/SNF-related, matrix-associated actin-dependent regulator of chromatin, subfamily a, containing DEAD/H box 1), also known as ETL1 or HEL1, is a 1,026 amino acid nuclear protein suggested to function as an ATP-dependent DNA helicase. A member of the SNF2/RAD54 helicase family, Smarcad1 undergoes post-translational phosphorylation by either ATM or ATR and contains one helicase C-terminal domain, a helicase ATP-binding domain and two CUE domains. Existing as two alternatively spliced isoforms, Smarcad1 is encoded by a gene that maps to human chromosome 4, which represents approximately 6% of the human genome, contains nearly 900 genes and is associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: SMARCD1 (human) mapping to 4q22.3.

## PROTOCOLS

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

## PRODUCT

Smarcad1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Smarcad1 shRNA Plasmid (h): sc-88856-SH and Smarcad1 shRNA (h) Lentiviral Particles: sc-88856-V as alternate gene silencing products.

For independent verification of Smarcad1 (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-88856A, sc-88856B and sc-88856C.

## 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

Smarcad1 siRNA (h) is recommended for the inhibition of Smarcad1 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 Smarcad1 gene expression knockdown using RT-PCR Primer: Smarcad1 (h)-PR: sc-88856-PR (20  $\mu$ l, 409 bp). 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.