SANTA CRUZ BIOTECHNOLOGY, INC.

ANKHD1 siRNA (m): sc-141067

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The Power to Question

BACKGROUND

ANKHD1 (ankyrin repeat and KH domain containing 1), also known as MASK or VBARP, is a 2,542 amino acid protein that localizes to the cytoplasm and contains one KH domain and 25 ankyrin repeats. Expressed ubiquitously as multiple alternatively spliced isoforms, one of which exhibits higher expression in spleen and another of which is present at high levels in brain and cervix, ANKHD1 functions as a scaffolding protein that interacts with SH-PTP2 and may be associated with tumor progression. Specifically, ANKHD1 is thought to posses anti-apoptotic effects that are essential for cell survival and may be associated with the abnormal phenotype of leukemia cells. The gene encoding ANKHD1 maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome.

REFERENCES

1. Smith, R.K., et al. 2002. MASK, a large ankyrin repeat and KH domain-containing protein involved in *Drosophila* receptor tyrosine kinase signaling. Development 129: 71-82.
2. Poulin, F., et al. 2003. Gene fusion and overlapping reading frames in the mammalian genes for 4E-BP3 and MASK. J. Biol. Chem. 278: 52290-52297.
3. Miles, M.C., et al. 2005. Molecular and functional characterization of a novel splice variant of ANKHD1 that lacks the KH domain and its role in cell survival and apoptosis. FEBS J. 272: 4091-4102.
4. Santos Duarte, Ada, S., et al. 2005. Characterisation of a new splice variant of MASK-BP3(ARF) and MASK human genes, and their expression patterns during haematopoietic cell differentiation. Gene 363: 113-122.
5. Traina, F., et al. 2006. ANKHD1, ankyrin repeat and KH domain containing 1, is overexpressed in acute leukemias and is associated with SHP2 in K562 cells. Biochim. Biophys. Acta 1762: 828-834.
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CHROMOSOMAL LOCATION

Genetic locus: Ankhd1 (mouse) mapping to 18 B2.

PRODUCT

ANKHD1 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 ANKHD1 shRNA Plasmid (m): sc-141067-SH and ANKHD1 shRNA (m) Lentiviral Particles: sc-141067-V as alternate gene silencing products.

For independent verification of ANKHD1 (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-141067A, sc-141067B and sc-141067C.

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

ANKHD1 siRNA (m) is recommended for the inhibition of ANKHD1 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 ANKHD1 gene expression knockdown using RT-PCR Primer: ANKHD1 (m)-PR: sc-141067-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.