SANTA CRUZ BIOTECHNOLOGY, INC.

RBM35A siRNA (h): sc-77526

BACKGROUND

RBM35A (RNA binding motif protein 35A) is a 681 amino acid protein that contains three RRM (RNA recognition motif) domains and is expressed as four alternatively spliced isoforms. The gene encoding RBM35A maps to human chromosome 8, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that map to chromosome 8.

REFERENCES

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2. Kashino, G., et al. 2001. Preferential expression of an intact WRN gene in Werner syndrome cell lines in which a normal chromosome 8 has been introduced. Biochem. Biophys. Res. Commun. 289: 111-115.
3. Selicorni, A., et al. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. Hum. Genet. 110: 64-67.
4. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. Am. J. Hum. Genet. 77: 582-595.
5. Agrelo, R., et al. 2006. Epigenetic inactivation of the premature aging Werner syndrome gene in human cancer. Proc. Natl. Acad. Sci. USA 103: 8822-8827.
6. Mossafa, H., et al. 2006. Non-Hodgkin's lymphomas with Burkitt-like cells are associated with c-Myc amplification and poor prognosis. Leuk. Lymphoma 47: 1885-1893.
7. Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. Nature 439: 331-335.
8. Tang, H.B., et al. 2008. Different expression of liver-specific Insulin-like growth factor I gene in breast cancer; expression with mice. Zhonghua Yi Xue Za Zhi 88: 1553-1556.

CHROMOSOMAL LOCATION

Genetic locus: ESRP1 (human) mapping to 8q22.1.

PRODUCT

RBM35A 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 RBM35A shRNA Plasmid (h): sc-77526-SH and RBM35A shRNA (h) Lentiviral Particles: sc-77526-V as alternate gene silencing products.

For independent verification of RBM35A (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-77526A, sc-77526B and sc-77526C.

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

RBM35A siRNA (h) is recommended for the inhibition of RBM35A 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 RBM35A gene expression knockdown using RT-PCR Primer: RBM35A (h)-PR: sc-77526-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Bhattacharya, R., et al. 2018. Mesenchymal splice isoform of CD44 (CD44s) promotes EMT/invasion and imparts stem-like properties to ovarian cancer cells. J. Cell. Biochem. 119: 3373-3383.
2. Nanni, M., et al. 2019. The aberrant expression of the mesenchymal variant of FGFR2 in the epithelial context inhibits autophagy. Cells 8: 653.
3. Ranieri, D., et al. 2020. Role of PKCε in the epithelial-mesenchymal transition induced by FGFR2 isoform switch. Cell Commun. Signal. 18: 76.
4. Jun, Y., et al. 2022. Comprehensive analysis of alternative splicing in gastric cancer identifies epithelial-mesenchymal transition subtypes associated with survival. Cancer Res. 82: 543-555.

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.