SANTA CRUZ BIOTECHNOLOGY, INC.

RASSF6 siRNA (m): sc-106485

BACKGROUND

Ras is a small GTP-binding protein involved in many cellular processes, including proliferation, differentiation and apoptosis. Ras transmits signals of cell surface receptors by binding to a variety of effector molecules. In addition to the well characterized effectors Raf and PI 3-kinase, Ras also interacts with members of the RASSF family, including RASSF1, RASSF2, RASSF3, RASSF4, RASSF6 and Nore1. Members of the RASSF family contain a highly conserved Ras association domain (Ral GDS/AF-6 or RA) and function as Ras effectors/tumor suppressors. RASSF6 (Ras association (RalGDS/AF-6) domain family member 6) is a 369 amino acid protein that contains one Ras-associating domain and one SARAH domain and is thought to function as a Ras effector protein. Multiple isoforms of RASSF6 exist due to alternative splicing events.

REFERENCES

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3. Ikeda, M., et al. 2007. Ras-association domain family protein 6 induces apoptosis via both caspase-dependent and caspase-independent pathways. Exp. Cell Res. 313: 1484-1495.
4. Allen, N.P., et al. 2007. RASSF6 is a novel member of the RASSF family of tumor suppressors. Oncogene 26: 6203-6211.
5. Avruch, J., et al. 2009. RASSF family of tumor suppressor polypeptides. J. Biol. Chem. 284: 11001-11005.
6. Richter, A.M., et al. 2009. The RASSF proteins in cancer; from epigenetic silencing to functional characterization. Biochim. Biophys. Acta 1796: 114-128.
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CHROMOSOMAL LOCATION

Genetic locus: Rassf6 (mouse) mapping to 5 E1.

PRODUCT

RASSF6 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 RASSF6 shRNA Plasmid (m): sc-106485-SH and RASSF6 shRNA (m) Lentiviral Particles: sc-106485-V as alternate gene silencing products.

For independent verification of RASSF6 (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-106485A, sc-106485B and sc-106485C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

RASSF6 siRNA (m) is recommended for the inhibition of RASSF6 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 RASSF6 gene expression knockdown using RT-PCR Primer: RASSF6 (m)-PR: sc-106485-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.