

RASSF10 siRNA (m): sc-152715

BACKGROUND

Activated Ras proteins may induce senescence, apoptosis and terminal differentiation, though they are often associated with stimulating growth and transformation. Members of the RASSF family contain a highly conserved Ras association domain (RalGDS/AF-6 or RA) and function as Ras effectors. RASSFs are implicated in various cellular mechanisms including cell cycle control and microtubule stabilization. Several members of the RASSF family may function as tumor suppressors. RASSF10 (Ras association (RalGDS/AF-6) domain family (N-terminal) member 10) is an evolutionarily conserved member of the N-terminal RASSF family which is also comprised of RASSF7, PAMC1 (or RASSF9) and RASSF8. RASSF10 contains an N-terminal RA domain and is believed to participate in the Ras signaling pathway. It is suggested that RASSF10 may have a potential role in leukemia. RASSF10 exists as two isoforms due to alternative splicing events.

REFERENCES

1. Vos, M.D. and Clark, G.J. 2006. RASSF family proteins and Ras transformation. *Meth. Enzymol.* 407: 311-322.
2. van der Weyden, L. and Adams, D.J. 2007. The Ras-association domain family (RASSF) members and their role in human tumorigenesis. *Biochim. Biophys. Acta* 1776: 58-85.
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. Imai, T., et al. 2008. Epigenetic inactivation of RASSF2 in oral squamous cell carcinoma. *Cancer Sci.* 99: 958-966.
6. Sherwood, V., et al. 2008. RASSF7 is a member of a new family of RAS association domain-containing proteins and is required for completing mitosis. *Mol. Biol. Cell* 19: 1772-1782.
7. Avruch, J., et al. 2009. RASSF family of tumor suppressor polypeptides. *J. Biol. Chem.* 284: 11001-11005.

CHROMOSOMAL LOCATION

Genetic locus: RASSF10 (mouse) mapping to 7 F1.

PRODUCT

RASSF10 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RASSF10 shRNA Plasmid (m): sc-152715-SH and RASSF10 shRNA (m) Lentiviral Particles: sc-152715-V as alternate gene silencing products.

For independent verification of RASSF10 (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-152715A, sc-152715B and sc-152715C.

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

APPLICATIONS

RASSF10 siRNA (m) is recommended for the inhibition of RASSF10 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 μ M in 66 μ 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 RASSF10 gene expression knockdown using RT-PCR Primer: RASSF10 (m)-PR: sc-152715-PR (20 μ 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 for detailed protocols and support products.