SANTA CRUZ BIOTECHNOLOGY, INC.

Raly siRNA (h): sc-76344

BACKGROUND

Raly, also known as hnRNP associated with lethal yellow homolog, autoantigen p542 or heterogeneous nuclear ribonucleoprotein C-like 2 (hnRNPCL2), is a 306 amino acid protein belonging to the RRM HNRPC family. Localized to the nucleus, Raly is thought to be an RNA-binding protein involved in pre-mRNA splicing. Phosphorylated upon DNA damage, Raly has been found to be a subunit of the spliceosome C complex. Raly is also an autoantigen that is cross-reactive with an Epstein-Barr virus protein. Raly is expressed at higher levels in pancreas, liver, skeletal muscle, lung, brain, heart and kidney with lower levels found in placenta. Produced by alternative splicing, Raly is expressed as two isoforms.

REFERENCES

1. Vaughan, J.H., et al. 1995. Epstein-Barr virus-induced autoimmune responses. I. Immunoglobulin M autoantibodies to proteins mimicking and not mimicking Epstein-Barr virus nuclear antigen-1. J. Clin. Invest. 95: 1306-1315.
2. Rhodes, G.H., et al. 1997. The p542 gene encodes an autoantigen that cross-reacts with EBNA-1 of the Epstein Barr virus and which may be a heterogeneous nuclear ribonucleoprotein. J. Autoimmun. 10: 447-454.
3. Khrebtukova, I., et al. 1999. Alternative processing of the human and mouse raly genes. Biochim. Biophys. Acta 1447: 107-112.
4. Jurica, M.S., et al. 2002. Purification and characterization of native spliceosomes suitable for three-dimensional structural analysis. RNA 8: 426-439.
5. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. Cell 125: 801-814.
6. Olsen, J.V., et al. 2006. Global, *in vivo,* and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.
7. Beranova-Giorgianni, S., et al. 2006. Phosphoproteomic analysis of the human pituitary. Pituitary 9: 109-120.

CHROMOSOMAL LOCATION

Genetic locus: RALY (human) mapping to 20q11.22.

PRODUCT

Raly 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 Raly shRNA Plasmid (h): sc-76344-SH and Raly shRNA (h) Lentiviral Particles: sc-76344-V as alternate gene silencing products.

For independent verification of Raly (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-76344A, sc-76344B and sc-76344C.

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

Raly siRNA (h) is recommended for the inhibition of Raly 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 Raly gene expression knockdown using RT-PCR Primer: Raly (h)-PR: sc-76344-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.