SANTA CRUZ BIOTECHNOLOGY, INC.

ANKRD30A siRNA (h): sc-90829

BACKGROUND

Ankyrins are membrane adaptor molecules that play important roles in coupling integral membrane proteins to the spectrin-based cytoskeleton network. Mutations of ankyrin genes lead to severe genetic diseases, such as fatal cardiac arrhythmias and hereditary spherocytosis. ANKRD30A (ankyrin repeat domain 30A), also known as serologically defined breast cancer antigen NY-BR-1, is a 1,397 amino acid coiled-coil protein. Containing 6 ANK repeats and 37 exons, ANKRD30A is a distant homolog of the POTE family. Initiated by either Dnmt1 or Met-57, ANKRD30A is highly expressed in breast and testis, and faintly in placenta. Present in 80% of breast cancers, but not in other types of tumors, ANKRD30A is a differentiation antigen and a potential target for antibody based therapies in breast cancers.

REFERENCES

1. Jäger, D., et al. 2002. Identification of tumor-restricted antigens NY-BR-1, SCP-1, and a new cancer/testis-like antigen NW-BR-3 by serological screening of a testicular library with breast cancer serum. Cancer Immun. 2: 5.
2. Jäger, D., et al. 2005. Humoral and cellular immune responses against the breast cancer antigen NY-BR-1: definition of two HLA-A2 restricted peptide epitopes. Cancer Immun. 5: 11.
3. Lacroix, M. 2006. Significance, detection and markers of disseminated breast cancer cells. Endocr. Relat. Cancer 13: 1033-1067.
4. Hahn, Y., et al. 2006. Duplication and extensive remodeling shaped POTE family genes encoding proteins containing ankyrin repeat and coiled coil domains. Gene 366: 238-245.
5. Rossi, M.R., et al. 2006. Array CGH analysis of pediatric medulloblastomas. Genes Chromosomes Cancer 45: 290-303.

CHROMOSOMAL LOCATION

Genetic locus: ANKRD30A (human) mapping to 10p11.21.

PRODUCT

ANKRD30A siRNA (h) is a pool of 2 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 ANKRD30A shRNA Plasmid (h): sc-90829-SH and ANKRD30A shRNA (h) Lentiviral Particles: sc-90829-V as alternate gene silencing products.

For independent verification of ANKRD30A (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-90829A and sc-90829B.

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.

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

ANKRD30A siRNA (h) is recommended for the inhibition of ANKRD30A 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 ANKRD30A gene expression knockdown using RT-PCR Primer: ANKRD30A (h)-PR: sc-90829-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.