SANTA CRUZ BIOTECHNOLOGY, INC.

Annexin A9 siRNA (h): sc-88790

BACKGROUND

The Annexin family of calcium-binding proteins contains several family members that are characterized by a conserved core domain, which binds phospholipids in a Ca^{2+}-dependent manner, and a unique amino-terminal region, which may confer binding specificity. Annexin family members have been implicated as regulators of diverse processes, such as ion flux, endocytosis, exocytosis and cellular adhesion. Annexin A9 (ANXA9), also known as Annexin-31 (ANX31) or Pemphaxin, is a 345 amino acid protein that contains four Annexin domains and may act as a low affinity receptor for acetylcholine. It is an atypical member of the Annexin family because its intracellular activity is not subject to Ca^{2+} regulation as a result of sequence mutations. Annexin A9 is one of the target proteins that is recognized by autoantibodies in patients with pemphigus vulgaris, a rare autoimmune skin condition in which blisters occur in the epidermis due to loss of cell-cell adhesion.

REFERENCES

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2. Chlystun, M., et al. 2004. Structural and functional characterisation of the mouse Annexin A9 promoter. Biochim. Biophys. Acta 1742: 141-149.
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4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 603319. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
6. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. Anticancer Res. 26: 953-959.
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CHROMOSOMAL LOCATION

Genetic locus: ANXA9 (human) mapping to 1q21.3.

PRODUCT

Annexin A9 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 Annexin A9 shRNA Plasmid (h): sc-88790-SH and Annexin A9 shRNA (h) Lentiviral Particles: sc-88790-V as alternate gene silencing products.

For independent verification of Annexin A9 (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-88790A, sc-88790B and sc-88790C.

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

Annexin A9 siRNA (h) is recommended for the inhibition of Annexin A9 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.

GENE EXPRESSION MONITORING

Annexin A9 (F-9): sc-374288 is recommended as a control antibody for monitoring of Annexin A9 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Annexin A9 gene expression knockdown using RT-PCR Primer: Annexin A9 (h)-PR: sc-88790-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.