SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α9 siRNA (m): sc-75341

BACKGROUND

Integrin α9 (Integrin αRLC) is a 1,035 amino acid protein encoded by the human gene ITGA9. Integrin α9 belongs to the integrin α chain family and contains seven FG-GAP repeats. Integrins are a large family of cell surface glycoproteins that mediate cell-cell adhesion and cell-matrix adhesion. They are heterodimers composed of an α and a β subunit bound noncovalently to each other. The α subunits contain a large N-terminal extracellular domain with seven conserved repeats of putative metal binding domains, a transmembrane segment, and a short C-terminal cytoplasmic tail. Integrin α9 is single-pass type I membrane protein found in airway epithelium, the basal layer of squamous epithelium, smooth muscle, skeletal muscle and hepatocytes as a heterodimer of an α and a β subunit.

REFERENCES

1. Yamakawa, K., et al. 1993. Frequent homozygous deletions in lung cancer cell lines detected by a DNA marker located at 3p21.3-p22. Oncogene 8: 327-330.
2. Palmer, E.L., et al. 1994. Sequence and tissue distribution of the Integrin α9 subunit, a novel partner of β1 that is widely distributed in epithelia and muscle. J. Cell Biol. 123: 1289-1297.
3. Daigo, Y., et al. 1999. Characterization of a 1,200-kb genomic segment of chromosome 3p22-p21.3. DNA Res. 6: 37-44.
4. Rao, H., et al. 2006. α9β1: a novel osteoclast Integrin that regulates osteoclast formation and function. J. Bone Miner. Res. 21: 1657-1665.
5. Gulubova, M.V. and Vlaykova, T.I. 2006. Significance of Tenascin-C, Fibronectin, Laminin, Collagen IV, α5β1 and α9β1 Integrins and fibrotic capsule formation around liver metastases originating from cancers of the digestive tract. Neoplasma 53: 372-383.
6. Chen, C., et al. 2006. The Integrin α9β1 contributes to granulopoiesis by enhancing granulocyte colony-stimulating factor receptor signaling. Immunity 25: 895-906.

CHROMOSOMAL LOCATION

Genetic locus: Itga9 (mouse) mapping to 9 F3.

PRODUCT

Integrin α9 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 Integrin α9 shRNA Plasmid (m): sc-75341-SH and Integrin α9 shRNA (m) Lentiviral Particles: sc-75341-V as alternate gene silencing products.

For independent verification of Integrin α9 (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-75341A, sc-75341B and sc-75341C.

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

Integrin α9 siRNA (m) is recommended for the inhibition of Integrin α9 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 Integrin α9 gene expression knockdown using RT-PCR Primer: Integrin α9 (m)-PR: sc-75341-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.