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SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin βL1 siRNA (m): sc-146248

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Most integrin receptors bind ligands that are components of the extracellular matrix, including Fibronectin, Collagen and Vitronectin. Certain integrins can also bind to soluble ligands, such as Fibrinogen, or to counterreceptors on adjacent cells such as the intracellular adhesion molecules (ICAMs), leading to aggregation of cells. Ligands serve to cross-link or cluster integrins by binding to adjacent integrin receptors; both receptor clustering and ligand occupancy are necessary for the activation of integrin-mediated responses. In addition to mediating cell adhesion and cytoskeletal organization, integrins function as signaling receptors. Signals transduced by integrins play a role in many biological processes, including cell growth, differentiation, migration and apoptosis. Integrin βL1 (integrin, β-like 1), also known as OSCP (osteoblast-specific cysteine-rich protein), TIED (ten integrin EGF-like repeat domain-containing protein) or ITGBL1, is a 494 amino acid secreted protein that is widely expressed in many tissues, but readily detectable only in aorta. Integrin βL1 contains ten tandem EGF-like repeats that are similar to those found in the cysteine rich "stalk-like" structure of integrin β-subunits.

REFERENCES

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5. Clark, E.A., et al. 1995. Integrins and signal transduction pathways: the road taken. Science 268: 233-239.
6. Sheppard, D. 1996. Epithelial integrins. Bioessays 18: 655-660.
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9. Berg, R.W., et al. 1999. Cloning and characterization of a novel β Integrin-related cDNA coding for the protein TIED ("ten β integrin EGF-like repeat domains") that maps to chromosome band 13q33: a divergent stand-alone integrin stalk structure. Genomics 56: 169-178.

CHROMOSOMAL LOCATION

Genetic locus: Itgbl1 (mouse) mapping to 14 E5.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

Integrin βL1 siRNA (m) is a target-specific 19-25 nt siRNA 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 βL1 shRNA Plasmid (m): sc-146248-SH and Integrin βL1 shRNA (m) Lentiviral Particles: sc-146248-V as alternate gene silencing 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

Integrin βL1 siRNA (m) is recommended for the inhibition of Integrin βL1 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 βL1 gene expression knockdown using RT-PCR Primer: Integrin βL1 (m)-PR: sc-146248-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.