SANTA CRUZ BIOTECHNOLOGY, INC.

ITFG3 siRNA (m): sc-146308

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16 α and 8 β subunits heterodimerize to produce more than 20 different receptors. Certain integrins can also bind to soluble ligands such as Fibrinogen, or to counter-receptors on adjacent cells, such as the intracellular adhesion molecules (ICAMs), leading to aggregation of cells. 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. ITFG3 (Integrin α FG-GAP repeat containing 3), also known as C16orf9, is a 552 amino acid single-pass transmembrane protein that contains FG-GAP repeats, a motif commonly found in Integrin proteins. There are two isoforms of ITFG3 that are produced as a result of alternative splicing events.

REFERENCES

1. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. Science 267: 883-885.
2. Clark, E.A., et al. 1995. Integrins and signal transduction pathways: the road taken. Science 268: 233-239.
3. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. Bioessays 18: 911-917.
4. Velling, T., et al. 1999. cDNA cloning and chromosomal localization of human α(11) integrin. A collagen-binding, I domain-containing, β_1-associated integrin α chain present in muscle tissues. J. Biol. Chem. 274: 25735-25742.
5. Banères, J.L., et al. 2000. A minimized human Integrin $\alpha_5\beta_1$ that retains ligand recognition. J. Biol. Chem. 275: 5888-5903.
6. Daniels, R.J., et al. 2001. Sequence, structure and pathology of the fully annotated terminal 2 Mb of the short arm of human chromosome 16. Hum. Mol. Genet. 10: 339-352.

CHROMOSOMAL LOCATION

Genetic locus: Itfg3 (mouse) mapping to 17 A3.3.

PRODUCT

ITFG3 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 ITFG3 shRNA Plasmid (m): sc-146308-SH and ITFG3 shRNA (m) Lentiviral Particles: sc-146308-V as alternate gene silencing products.

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

ITFG3 siRNA (m) is recommended for the inhibition of ITFG3 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 ITFG3 gene expression knockdown using RT-PCR Primer: ITFG3 (m)-PR: sc-146308-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.