SANTA CRUZ BIOTECHNOLOGY, INC.

FLRT2 siRNA (m): sc-75037

BACKGROUND

The leucine-rich repeat (LRR) is a 20-30 amino acid motif that forms a hydrophobic α/β horseshoe fold, allowing it to accommodate several leucine residues within a tightly packed core. All LRRs contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. FLRT2 (fibronectin leucine rich transmembrane protein 2), is a 660 amino acid single-pass type I membrane protein that is expressed in pancreas, skeletal muscle, brain and heart. Comprised of one fibronectin type-III domain and ten LRR (leucine-rich repeats), FLRT2 may play a role in cell adhesion and/or receptor signaling. It is suggested that FLRT2 is involved in mediating events such as NCC (neural crest cell) migration, chondrogenesis and epithelial-mesenchymal interactions during craniofacial development.

REFERENCES

1. Lacy, S.E., et al. 1999. Identification of FLRT1, FLRT2, and FLRT3: a novel family of transmembrane leucine-rich repeat proteins. Genomics 62: 417-426.
2. Tsuji, L., et al. 2004. FLRT3, a cell surface molecule containing LRR repeats and a FNIII domain, promotes neurite outgrowth. Biochem. Biophys. Res. Commun. 313: 1086-1091.
3. Robinson, M., et al. 2004. FLRT3 is expressed in sensory neurons after peripheral nerve injury and regulates neurite outgrowth. Mol. Cell. Neurosci. 27: 202-214.
4. Böttcher, R.T., et al. 2004. The transmembrane protein XFLRT3 forms a complex with FGF receptors and promotes FGF signalling. Nat. Cell Biol. 6: 38-44.
5. Enkhbayar, P., et al. 2004. Structural principles of leucine-rich repeat (LRR) proteins. Proteins 54: 394-403.
6. Haines, B.P., et al. 2006. Regulated expression of FLRT genes implies a functional role in the regulation of FGF signalling during mouse development. Dev. Biol. 297: 14-25.

CHROMOSOMAL LOCATION

Genetic locus: Flrt2 (mouse) mapping to 12 E.

PRODUCT

FLRT2 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 FLRT2 shRNA Plasmid (m): sc-75037-SH and FLRT2 shRNA (m) Lentiviral Particles: sc-75037-V as alternate gene silencing products.

For independent verification of FLRT2 (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-75037A, sc-75037B and sc-75037C.

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

FLRT2 siRNA (m) is recommended for the inhibition of FLRT2 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 FLRT2 gene expression knockdown using RT-PCR Primer: FLRT2 (m)-PR: sc-75037-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.