

FLRT1 (D-20): sc-82595

BACKGROUND

The leucine-rich (LRR) repeat 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 LRR repeats contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. FLRT1 (fibronectin leucine rich transmembrane protein 1) is a 646 amino acid single-pass type I membrane protein that contains one fibronectin type-III domain and ten LRR repeats. Expressed in kidney and brain, FLRT1 is thought to play a role in cell adhesion and receptor signaling. FLRT1 shares similarity with FLRT2 and FLRT3 and is subject to post-translational N-glycosylation. The gene encoding FLRT1 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome.

REFERENCES

1. Kobe, B. and Deisenhofer, J. 1994. The leucine-rich repeat: a versatile binding motif. *Trends Biochem. Sci.* 19: 415-421.
2. Kobe, B. and Deisenhofer, J. 1995. Proteins with leucine-rich repeats. *Curr. Opin. Struct. Biol.* 5: 409-416.
3. Lacy, S.E., Bönnemann, C.G., Buzney, E.A. and Kunkel, L.M. 1999. Identification of FLRT1, FLRT2, and FLRT3: a novel family of transmembrane leucine-rich repeat proteins. *Genomics* 62: 417-426.
4. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604806. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Kobe, B. and Kajava, A.V. 2001. The leucine-rich repeat as a protein recognition motif. *Curr. Opin. Struct. Biol.* 11: 725-732.
6. Kedzierski, Ł, Montgomery, J., Curtis, J. and Handman, E. 2004. Leucine-rich repeats in host-pathogen interactions. *Arch. Immunol. Ther. Exp.* 52: 104-112.
7. Enkhbayar, P., Kamiya, M., Osaki, M., Matsumoto, T. and Matsushima, N. 2004. Structural principles of leucine-rich repeat (LRR) proteins. *Proteins* 54: 394-403.
8. Haines, B.P., Wheldon, L.M., Summerbell, D., Heath, J.K. and Rigby, P.W. 2006. Regulated expression of FLRT genes implies a functional role in the regulation of FGF signalling during mouse development. *Dev. Biol.* 297: 14-25.
9. Maretto, S., Müller, P.S., Aricescu, A.R., Cho, K.W., Bikoff, E.K. and Robertson, E.J. 2008. Ventral closure, headfold fusion and definitive endoderm migration defects in mouse embryos lacking the fibronectin leucine-rich transmembrane protein FLRT3. *Dev. Biol.* 318: 184-193.

CHROMOSOMAL LOCATION

Genetic locus: FLRT1 (human) mapping to 11q13.1.

SOURCE

FLRT1 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of FLRT1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-82595 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FLRT1 (D-20) is recommended for detection of FLRT1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family members FLRT2 or FLRT3.

FLRT1 (D-20) is also recommended for detection of FLRT1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for FLRT1 siRNA (h): sc-75034, FLRT1 shRNA Plasmid (h): sc-75034-SH and FLRT1 shRNA (h) Lentiviral Particles: sc-75034-V.

Molecular Weight of FLRT1 precursor: 70 kDa.

Molecular Weight of glycosylated FLRT1: 90 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

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