

FLRT2 (K-20): sc-82153

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. 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

- 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.
- 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.
- 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.
- 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.
- Enkhbayar, P., et al. 2004. Structural principles of leucine-rich repeat (LRR) proteins. *Proteins* 54: 394-403.
- 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.
- Karaulanov, E.E., et al. 2006. A role for fibronectin-leucine-rich transmembrane cell-surface proteins in homotypic cell adhesion. *EMBO Rep.* 7: 283-290.
- Maretto, S., et al. 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: FLRT2 (human) mapping to 14q31.3; Flrt2 (mouse) mapping to 12 E.

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.

SOURCE

FLRT2 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of FLRT2 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-82153 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FLRT2 (K-20) is recommended for detection of FLRT2 of mouse, rat and 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 FLRT1 or FLRT3.

FLRT2 (K-20) is also recommended for detection of FLRT2 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for FLRT2 siRNA (h): sc-75036, FLRT2 siRNA (m): sc-75037, FLRT2 shRNA Plasmid (h): sc-75036-SH, FLRT2 shRNA Plasmid (m): sc-75037-SH, FLRT2 shRNA (h) Lentiviral Particles: sc-75036-V and FLRT2 shRNA (m) Lentiviral Particles: sc-75037-V.

Molecular Weight of FLRT2: 74 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.

SELECT PRODUCT CITATIONS

- Yamagishi, S., et al. 2011. FLRT2 and FLRT3 act as repulsive guidance cues for Unc5-positive neurons. *EMBO J.* 30: 2920-2933.

PROTOCOLS

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