

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FLRT3 in direct ELISAs and Western blots. In direct ELISAs, less than 10% cross-reactivity with recombinant human FLRT1 and rhFLRT2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human FLRT3 Lys29-Pro528 Accession # Q9NZU0
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human FLRT3 (Catalog # 2795-FL)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

FLRT3 is one of three FLRT (fibronectin, leucine rich repeat, transmembrane) glycoproteins expressed in distinct areas of the developing brain and other tissues (1, 2). The 85-95 kDa type I transmembrane (TM) human FLRT3 is synthesized as a 649 amino acid (aa) precursor with a 28 aa signal sequence, a 500 aa extracellular domain (ECD), a 21 aa TM segment and a 100 aa cytoplasmic region. The ECD contains 10 N-terminal leucine-rich repeats flanked by cysteine-rich areas, and a juxtamembrane fibronectin type III domain (1). The human FLRT3 ECD shares 96%, 96%, 97%, 97%, 98%, and 81% aa sequence identity with mouse, rat, canine, bovine, equine, and *Xenopus* FLRT3 ECD, respectively, and 61% and 48% aa identity to human FLRT2 and FLRT3 ECDs, respectively. The fibronectin domain is responsible for binding to FGF receptors, and is thought to regulate FGF signaling during development (2, 3). The LRR domains are responsible for both the localization in areas of cell contact and homotypic cell-cell association (4). This may be through direct interaction with other FLRT molecules, or alternatively, by regulating internalization of adhesion molecules such as cadherins (4, 5). Developmentally, FLRT3 is located in somitic regions on dermatomyotomal muscle precursors and myotomal cells before their migration to the myotome and syndetome, respectively (2). FLRT3 is also expressed at the midbrain/hindbrain boundary and in the apical ectodermal ridge where it may influence FGF signaling (2). Genetic deletion in mouse embryos results in defective headfold fusion and endoderm migration (6). Postnatally, FLRT3 mRNA is widely expressed (1). It is upregulated and promotes neurite outgrowth following experimental peripheral nerve injury in rats (7, 8).

References:

1. Lacy, S.E. *et al.* (1999) *Genomics* **62**:417.
2. Haines, B.P. *et al.* (2006) *Dev. Biol.* **297**:14.
3. Bottcher, R.T. *et al.* (2004) *Nat. Cell Biol.* **6**:38.
4. Karaulanov, E.E. *et al.* (2006) *EMBO Rep.* **7**:283.
5. Ogata, S. *et al.* (2007) *Genes Dev.* **21**:1817.
6. Maretto, S. *et al.* (2008) *Dev. Biol.* **318**:184.
7. Tsuji, L. *et al.* (2004) *Biochem. Biophys. Res. Commun.* **313**:1086.
8. Robinson, M. *et al.* (2004) *Mol. Cell. Neurosci.* **27**:202.