

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FLRT2 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human FLRT2 Cys36-Ser539 Accession # O43155
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	1 µg/mL	NCI-H460 human large cell lung carcinoma cell line
Simple Western	10 µg/mL	NCI-H460 human large cell lung carcinoma cell line

DATA

Western Blot

Detection of Human FLRT2 by Western Blot. Western Blot shows lysates of NCI-H460 human large cell lung carcinoma cell line. PVDF membrane was probed with 1 µg/ml of Goat Anti-Human FLRT2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2877) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for FLRT2 at approximately 80 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

Simple Western

Detection of Human FLRT2 by Simple Western™. Simple Western shows lysates of NCI-H460 human large cell lung carcinoma cell line, loaded at 0.5 mg/ml. A specific band was detected for FLRT2 at approximately 139 kDa (as indicated) using 10 µg/mL of Goat Anti-Human FLRT2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2877). This experiment was conducted under reducing conditions and using the 12-230kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
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

FLRT2 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 kDa type I transmembrane (TM) human FLRT2 is synthesized as a 660 amino acid (aa) precursor with a 35 aa signal sequence, a 506 aa extracellular domain (ECD), a 21 aa TM segment and a 98 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 FLRT2 ECD shares 97%, 96%, 99%, 96% and 95% aa sequence identity with mouse, rat, equine, canine and bovine FLRT2 ECD, respectively. Human FLRT1 and FLRT3 ECDs share approximately 47% aa identity with FLRT2. The fibronectin domain of all three FLRTs can bind to FGF receptors (2). This binding is thought to regulate FGF signaling during development (2, 3). The LRR domains are responsible for both the localization of FLRTs in areas of cell contact and homotypic cell-cell association (4). This may be through direct interactions with other FLRT molecules or, as has been shown for FLRT3, by regulating internalization of adhesion molecules such as cadherins (4, 5). In adulthood, FLRT2 mRNA is most abundant in pancreas, but is also present in skeletal muscle, brain and heart (1). FLRT2 in mouse embryos shows highest expression in a subset of the sclerotome in the brain, the stomach, and posterior to the developing heart (2). This expression is distinct from that of FLRT1 and FLRT3 (2).

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.