

FLRT3 Protein, Human, Recombinant (His)

General Information

Synonyms:	fibronectin leucine rich transmembrane protein 3;HH21
Protein Construction:	Lys29-Pro528
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9NZU0
Molecular Weight:	58 kDa (predicted); 60-110 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Leucine-rich repeat transmembrane protein FLRT3, also known as Fibronectin-like domain-containing leucine-rich transmembrane protein 3, and FLRT3, is a single-pass type I membrane protein which belongs to the fibronectin leucine rich transmembrane protein (FLRT) family. FLRT3 contains one fibronectin type-III domain and ten LRR (leucine-rich) repeats and is expressed in kidney, brain, pancreas, skeletal muscle, lung, liver, placenta, and heart. It has a provocative expression pattern during somite development being expressed in regions of the somite where muscle precursor cells migrate from the dermomyotome and move into the myotome, and later in

myotomal precursors destined to migrate towards their final destination. FLRT1, FLRT2 and FLRT3 are members of the FLRT family. The FLRT family of leucine-rich repeat (LRR) proteins is implicated in fibroblast growth factor (FGF) signalling, early embryonic development and neurite outgrowth. FLRT3 shares 55% amino acid sequence identity with FLRT1 and 44% identity with FLRT2. Two alternatively spliced transcript variants encoding the same protein have been described. The expression of FLRT3 is controlled by fibroblast growth factors (FGFs). FLRT3 has been implicated in neurite outgrowth after nerve damage, as a positive regulator of FGF signalling and in homotypic cell adhesion. FLRT3 may have a crucial role in regulating cellular adhesion between the epithelial apical ridge and the underlying mesenchyme and in establishing the dorso-ventral position of the ridge.

Reference

- Smith TG, et al. (2006) The expression of Flrt3 during chick limb development. *Int J Dev Biol.* 50(8): 701-4.
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- Karaulanov EE, et al. (2006) A role for fibronectin-leucine-rich transmembrane cell-surface proteins in homotypic cell adhesion. *EMBO Rep.* 7(3): 283-90.
- Gong SG, et al. (2009) Flrt2 and Flrt3 have overlapping and non-overlapping expression during craniofacial development. *Gene Expr Patterns.* 29(7): 497-502.

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