

Human FLRT1 Protein (His Tag)

Catalog Number: 11389-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

SPG68; AW742165; D630040I23Rik

Protein Construction:

A DNA sequence encoding the human FLRT1 extracellular domain (Q9NZU1-1) (Met 1-Pro 524) was expressed, fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 96 % as determined by SDS-PAGE

Bio Activity:

Measured by the ability of the immobilized protein to support the adhesion of Neuro2A mouse neuroblastoma cells. When cells are added to coated plates (5µg/mL, 100µL/well), approximately 50%-70% will adhere after 1 hour at 37°C.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ile 21

Molecular Mass:

The recombinant human FLRT1 consists of 515 amino acids and predicts a molecular mass of 57 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh FLRT1 is approximately 65 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

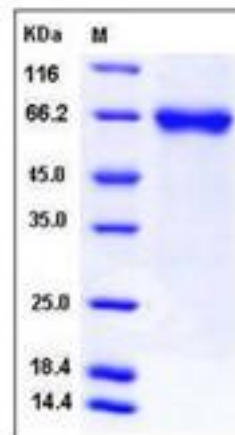
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The three fibronectin leucine-rich repeat transmembrane (FLRT) proteins contain 10 leucine-rich repeats (LRR), a type III fibronectin (FN) domain, followed by the transmembrane region, and a short cytoplasmic tail. FLRT1 is expressed in kidney and brain, which is a target for tyrosine phosphorylation mediated by FGFR1 and implicate a non-receptor Src family kinase (SFK). All FLRTs can interact with FGFR1 and FLRTs can be induced by the activation of FGF signalling by FGF-2. The phosphorylation state of FLRT1, which is itself FGFR1 dependent, may play a critical role in the potentiation of FGFR1 signalling and may also depend on a SFK-dependent phosphorylation mechanism acting via the FGFR. This is consistent with an 'in vivo' role for FLRT1 regulation of FGF signalling via SFKs. Furthermore, the phosphorylation-dependent futile cycle mechanism controlling FGFR1 signalling is concurrently crucial for regulation of FLRT1-mediated neurite outgrowth. FLRT1, FLRT2 and FLRT3 are members of the fibronectin leucine rich transmembrane protein (FLRT) family. They may function in cell adhesion and/or receptor signalling. Their protein structures resemble small leucine-rich proteoglycans found in the extracellular matrix. FLRT3 shares 55% amino acid sequence identity with FLRT1.

References

1. Lacy SE, *et al.* (1999) Identification of FLRT1, FLRT2, and FLRT3: a novel family of transmembrane leucine-rich repeat proteins. *Genomics*. 62(3): 417-26.
2. Haines BP, *et al.* (2006) Regulated expression of FLRT genes implies a functional role in the regulation of FGF signalling during mouse development. *Dev Biol*. 297(1): 14-25.
3. Mareto 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(1): 184-93.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>