

Gene Section

Mini Review

FSCN1 (fascin homolog 1, actin-bundling protein (Strongylocentrotus purpuratus))

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Published in Atlas Database: November 2008

Online updated version : <http://AtlasGeneticsOncology.org/Genes/FSCN1ID44342ch7p22.html>
DOI: 10.4267/2042/44581

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Identity

Other names: FLJ38511, SNL, p55, HSN, FAN1, FASCIN1

HGNC (Hugo): FSCN1

Location: 7p22.1

DNA/RNA

Description

The gene encompasses 13,833 bp of DNA.

Transcription

The length of the transcript is 2,819 bp containing 1,482 bp open reading frame.

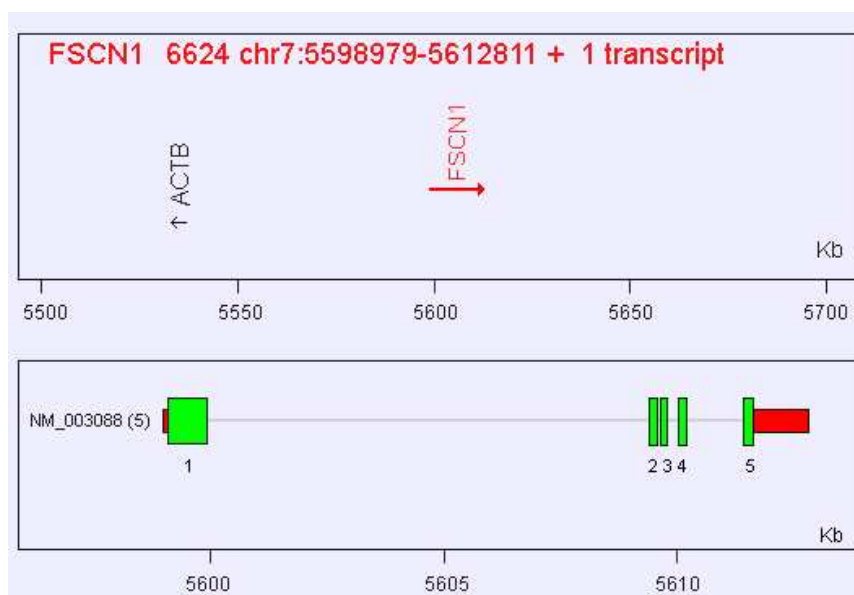
Protein

Description

FSCN1 encodes a 493-amino acid protein fascin with a molecular mass of 55 kD. Fascin was first isolated from sea urchin egg extracts, and then identified in *Drosophila* and in B-lymphocytes.

Expression

Fascin is widely expressed including the brain, blood, colon, lung, breast, ovary, and testis. In the brain, fascin expression has been localized to neurons, glial cells, and endothelial cells.



Localisation

Fascin colocalizes with filopodia, membrane ruffles, lamellopodia, microspikes, focal adhesions, cytoplasm and actin stress fibers. Additionally, fascin has been shown to localize to lamellipodia and filopodia in growth cones of cultured neurons.

Function

Fascin is an actin-bundling protein that provides rigidity to filopodial bundles to efficiently push the membrane forward during cytoskeleton remodeling and cell migration.

Mutations

Germinal

Unknown.

Somatic

Unknown.

Implicated in

Glioma

Disease

Fascin expression increases with increasing histological grade of glioma and is associated with adhesion, migration, and invasion of glioma cells.

Cancer

Disease

High-level expression of fascin has been observed in several types of human neoplasms, such as cancer of colon, breast, lung, kidney, ovary, cervix, and esophagus. It correlates with lymph node or distant metastasis in cancers of colon, kidney, and esophagus, and plays a role as an independent marker of poor prognosis. It is also associated with increased cellular proliferation in non-small cell lung adenocarcinoma, colon carcinoma, and esophageal squamous cell carcinoma. In colon adenocarcinoma and esophageal carcinoma cells, fascin is associated with cellular motility and invasive properties.

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This article should be referenced as such:

Nagai S, Smith CA, Mondal S, Rutka JT. FSCN1 (fascin homolog 1, actin-bundling protein (*Strongylocentrotus purpuratus*)). *Atlas Genet Cytogenet Oncol Haematol*. 2009; 13(10):724-725.
