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

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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, lamellipodia, 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.

References


This article should be referenced as such: