FXYD5 (FXYD domain containing ion transport regulator 5)

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Identity

Other names: DYSAD; Dysadherin; HSPC113; IWU-1; IWU1; KCT1; OIT2; PRO6241; RIC; UNQ2561
HGNC (Hugo): FXYD5
Location: 19q13.12

DNA/RNA

Transcription
0.9 kb mRNA; 534 bp open reading frame.

Protein

Dysadherin protein consists of 178 amino acids.

Description

The deduced amino acid sequence consisted of two hydrophobic regions corresponding to a signal peptide and a transmembrane domain (146-162), a serine-, threonine-, and proline-rich extracellular domain, which is a target for O-glycosylation, and a short cytoplasmic region containing positively charged amino acid residues.

Expression

Endothelial cell, T lymphocytes, basal cell of squamous epithelium.

Localisation

Cell membrane.

Homology

The transmembrane domain of dysadherin and mouse RIC especially showed a very high degree of similarity to other ion channels such as Mat-8 chloride channel, phospholemman, which is the major plasma membrane substrate for cAMP dependent protein kinase and protein kinase C, and the subunit of Na, K-ATPase.

Implicated in

Various cancers

Disease

Dysadherin, newly identified cell membrane glycoprotein, downregulates E-cadherin and promotes cancer invasion and metastasis. A reverse correlation between dysadherin expression and E-cadherin expression was observed in various cancers. Increased dysadherin expression was correlated with poor prognosis with head and neck squamous cell carcinoma, esophageal carcinoma, gastric carcinoma, colorectal carcinoma, melanoma and so on. Dysadherin expression in epithelioid sarcomas could be a used as a powerful diagnostic marker for distinguishing epithelioid sarcomas from malignant rhabdoid tumors.

References


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