

CPTC-CD44-2 (CAB080021)

Uniprot ID: [P16070](#)

Protein name: CD44_HUMAN

Full name: CD44 antigen

Tissue specificity: Isoform 10 (epithelial isoform) is expressed by cells of epithelium and highly expressed by carcinomas. Expression is repressed in neuroblastoma cells.

Function: Cell-surface receptor that plays a role in cell-cell interactions, cell adhesion and migration, helping them to sense and respond to changes in the tissue microenvironment (PubMed:16541107, PubMed:19703720, PubMed:22726066). Participates thereby in a wide variety of cellular functions including the activation, recirculation and homing of T-lymphocytes, hematopoiesis, inflammation and response to bacterial infection (PubMed:7528188). Engages, through its ectodomain, extracellular matrix components such as hyaluronan/HA, collagen, growth factors, cytokines or proteases and serves as a platform for signal transduction by assembling, via its cytoplasmic domain, protein complexes containing receptor kinases and membrane proteases (PubMed:18757307, PubMed:23589287). Such effectors include PKN2, the RhoGTPases RAC1 and RHOA, Rho-kinases and phospholipase C that coordinate signaling pathways promoting calcium mobilization and actin-mediated cytoskeleton reorganization essential for cell migration and adhesion (PubMed:15123640).

Subcellular location:

Cell membrane (*experimental evidence*) (Topo: Single-pass type I membrane protein (*match to sequence model*))

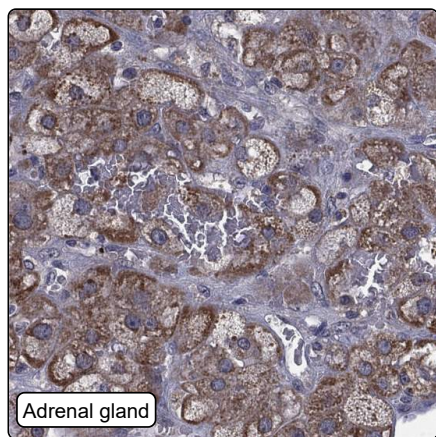
Cell projection > Microvillus (*by similarity*)

NOTE: Colocalizes with actin in membrane protrusions at wounding edges. Co-localizes with RDX, EZR and MSN in microvilli. Localizes to cholesterol-rich membrane-bound lipid raft domains.

Protein existence: Experimental evidence at protein level

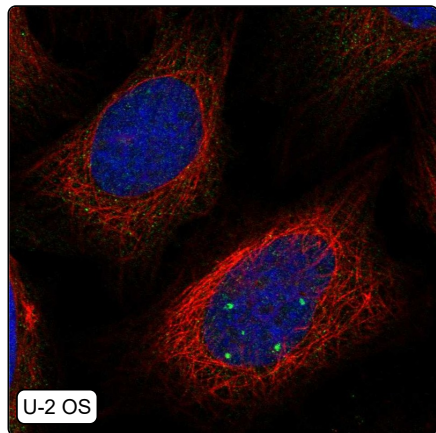
Comment:

Immunohistochemistry



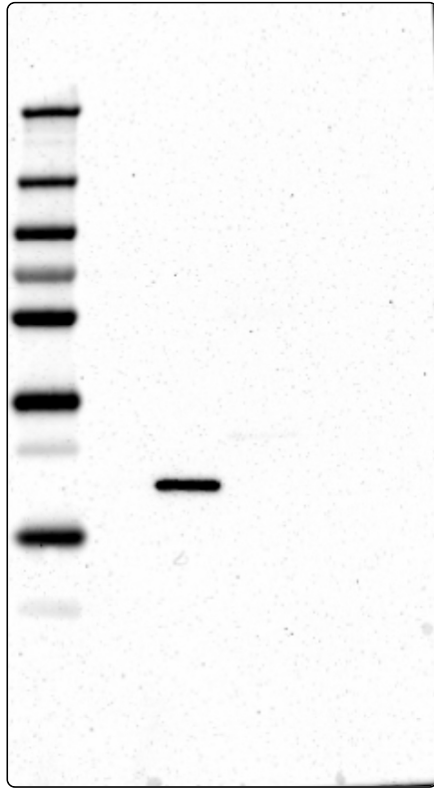
IHC protocol:	HIER pH6, Dilution 1:250
IHC test staining:	Rare granular cytoplasmic positivity in a subset of cells.
Literature conformance:	Not consistent with gene/protein characterization data
Literature significance:	
RNA consistency:	Not consistent with RNA expression data
IHC Sibling similarity:	Other antibody shows dissimilar IHC staining pattern
IHC fail comment:	ANTIBODY FAILED: Improbable subcellular location,Dissimilar sibling,Not consistent with RNA

Immunofluorescence



IF Overlay:	antibody (green), anti-tubuline (red) and DAPI (blue)
IF main location:	Nuclear bodies - 12: Uncertain (auto)
IF additional location:	
IF Antibody score:	Failed IF
IF in A549:	Negative
IF in GAMG:	Negative
IF in U-2 OS:	Nuclear bodies

Western blot



WB Size markers (kDa):	250, 130, 100, 70, 55, 35, 25, 15, 10
WB Lanes:	Marker (1), RT4 (2), U-251 MG (3), Plasma (4), Liver (5), Tonsil (6)
WB Target weight (kDa):	9, 9, 13, 16, 19, 20, 20, 21, 21, 21, 21, 21, 23, 25, 26, 26, 27, 29, 31, 31, 32, 37, 39, 47, 53, 77, 82
WB Validation:	Supported (Single band corresponding to the predicted size in kDa (+/-20%.))