

CPTC-SVIL-1 (CAB080402)

Uniprot ID: O95425

Protein name: SVIL_HUMAN

Full name: Supervillin

Tissue specificity: Expressed in many tissues. Most abundant in muscle, bone marrow, thyroid gland and salivary gland. Isoform 1 (archvillin) is muscle specific.

Function: [Isoform 1]: Forms a high-affinity link between the actin cytoskeleton and the membrane. Is among the first costameric proteins to assemble during myogenesis and it contributes to myogenic membrane structure and differentiation (PubMed:12711699). Appears to be involved in myosin II assembly. May modulate myosin II regulation through MLCK during cell spreading, an initial step in cell migration. May play a role in invadopodial function (PubMed:19109420). [Isoform 2]: May be involved in modulation of focal adhesions. Supervillin-mediated down-regulation of focal adhesions involves binding to TRIP6. Plays a role in cytokinesis through KIF14 interaction (By similarity).

Subcellular location:

Cell membrane (Topo: Peripheral membrane protein ; Orientation: Cytoplasmic side)

Cytoplasm > Cytoskeleton

Cell projection > Invadopodium

Cell projection > Podosome

Midbody (by similarity)

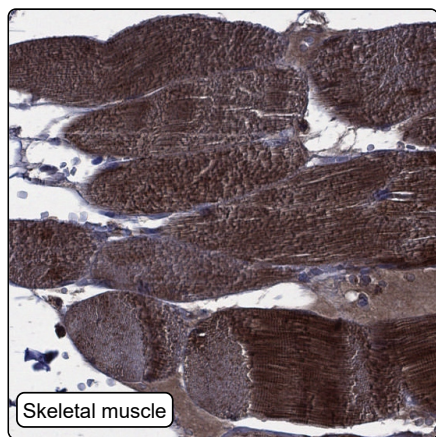
Cleavage furrow (by similarity)

NOTE: Tightly associated with both actin filaments and plasma membranes.

Protein existence: Experimental evidence at protein level

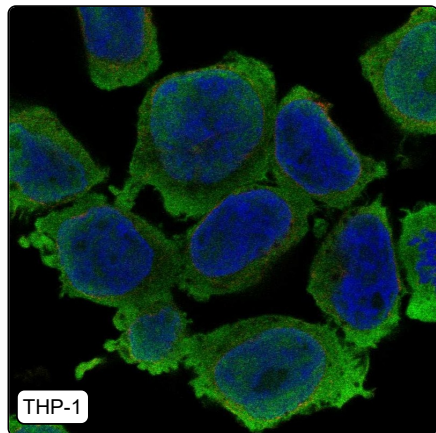
Comment: IF: nice stain/Charlotte

Immunohistochemistry



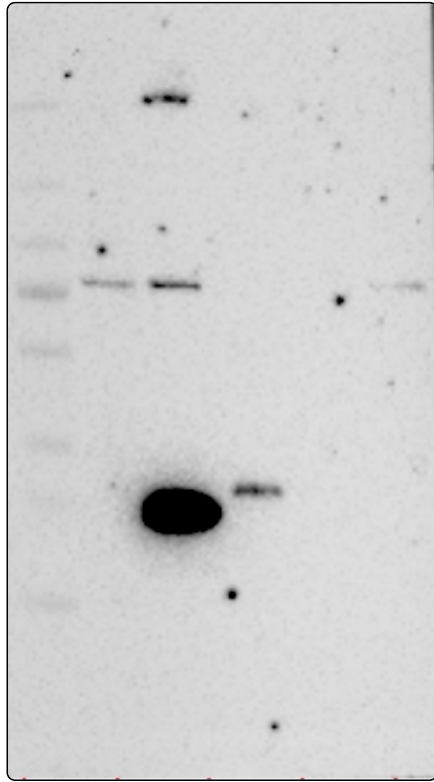
IHC protocol:	HIER pH6, Dilution 1:285
IHC test staining:	Cytoplasmic staining most abundant in muscle, immune cells, salivary gland.
Literature conformance:	Consistent with extensive gene/protein characterization data
Literature significance:	
RNA similarity:	Medium consistency between antibody staining and RNA expression data
RNA tissue specificity:	Tissue enhanced (skeletal muscle,tongue)
RNA tissue distribution:	Detected in all
IHC Sibling similarity:	Other antibody shows partly similar IHC staining pattern

Immunofluorescence



IF Overlay:	antibody (green), anti-tubulin (red) and DAPI (blue)
IF main location:	Plasma membrane - 3: Supportive (auto)
IF additional location:	
IF approved for publication on HPA:	Yes
IF in THP-1:	Plasma membrane
IF in U2OS:	Plasma membrane

Western blot



WB Size markers (kDa):	250, 130, 100, 70, 55, 35, 25, 15, 10
WB Lanes:	Marker (1), RT-4 (2), U-251MG (3), Plasma (4), Liver (5), Tonsil (6)
WB Target weight (kDa):	0, 32, 108, 201, 214, 245, 248
WB Validation:	Uncertain (Weak band of predicted size but with additional bands of higher intensity also present.)