CPTC-LAT-1 (CAB079960)

Uniprot ID: O43561
Protein name: LAT_HUMAN
Full name: Linker for activation of T-cells family member 1
Tissue specificity: Expressed in thymus, T-cells, NK cells, mast cells and, at lower levels, in spleen. Present in T-cells but not B-cells (at protein level).
Function: Required for TCR (T-cell antigen receptor)- and pre-TCR-mediated signaling, both in mature T-cells and during their development. Involved in FCGR3 (low affinity immunoglobulin gamma Fc region receptor III)-mediated signaling in natural killer cells and FCER1 (high affinity immunoglobulin epsilon receptor)-mediated signaling in mast cells. Couples activation of these receptors and their associated kinases with distal intracellular events such as mobilization of intracellular calcium stores, PKC activation, MAPK activation or cytoskeletal reorganization through the recruitment of PLCG1, GRB2, GRAP2, and other signaling molecules.
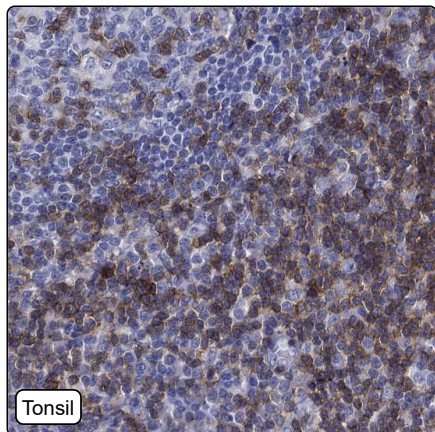**Subcellular location**:
Cell membrane (*experimental evidence*) (Topo: Single-pass type III membrane protein (*experimental evidence*))
NOTE: Present in lipid rafts.
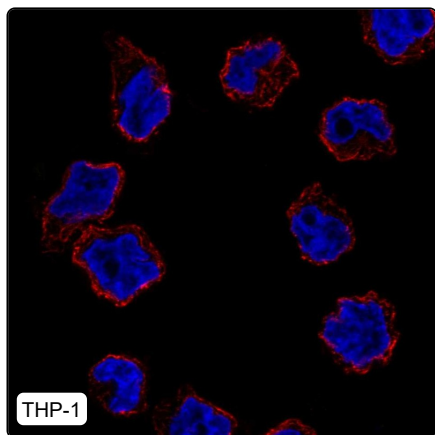**Protein existence**: Experimental evidence at protein level
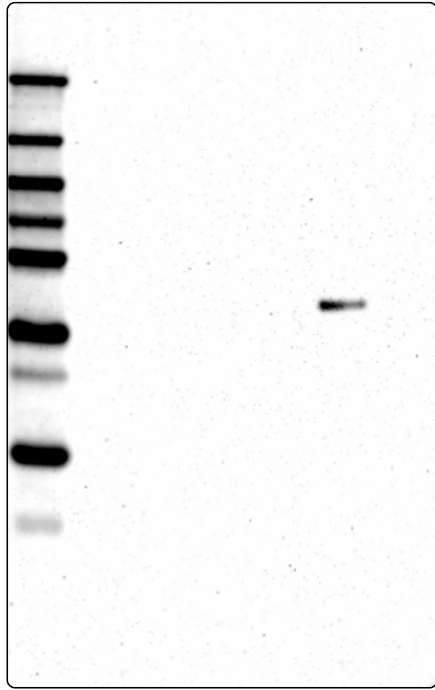
Comment:

Immunohistochemistry

Tonsil

IHC protocol:	HIER pH6, Dilution 1:250
IHC test staining:	Moderate positivity in immune cells.
Literature conformance:	Consistent with extensive gene/protein characterization data
Literature significance:	
RNA consistency:	Consistent with RNA expression data
IHC Sibling similarity:	Other antibody shows similar IHC staining pattern

Immunofluorescence

THP-1

IF Overlay:	antibody (green), anti-tubuline (red) and DAPI (blue)
IF main location:	
IF additional location:	
IF Antibody score:	Failed IF
IF in HEL:	Negative
IF in THP-1:	Negative
IF in U-2 OS:	Negative

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, 17, 25, 25, 25, 27, 28, 28, 29
WB Validation:	Uncertain (Single band differing more than +/-20% from predicted size in kDa and not supported by experimental and/or bioinformatic data.)