

# CPTC-TAP2-1 (CAB080000)

**Uniprot ID:** [Q03519](#)

**Protein name:** TAP2\_HUMAN

**Full name:** Antigen peptide transporter 2

**Function:** Involved in the transport of antigens from the cytoplasm to the endoplasmic reticulum for association with MHC class I molecules. Also acts as a molecular scaffold for the final stage of MHC class I folding, namely the binding of peptide. Nascent MHC class I molecules associate with TAP via tapasin. Inhibited by the covalent attachment of herpes simplex virus ICP47 protein, which blocks the peptide-binding site of TAP. Inhibited by human cytomegalovirus US6 glycoprotein, which binds to the luminal side of the TAP complex and inhibits peptide translocation by specifically blocking ATP-binding to TAP1 and prevents the conformational rearrangement of TAP induced by peptide binding. Inhibited by human adenovirus E3-19K glycoprotein, which binds the TAP complex and acts as a tapasin inhibitor, preventing MHC class I/TAP association.

**Subcellular location:**

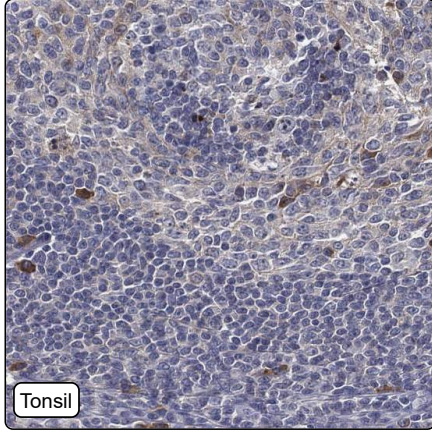
Endoplasmic reticulum membrane (Topo: Multi-pass membrane protein)

**NOTE:** The transmembrane segments seem to form a pore in the membrane.

**Protein existence:** Experimental evidence at protein level

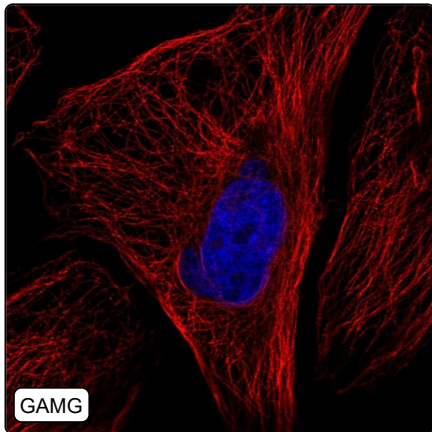
**Comment:**

## Immunohistochemistry



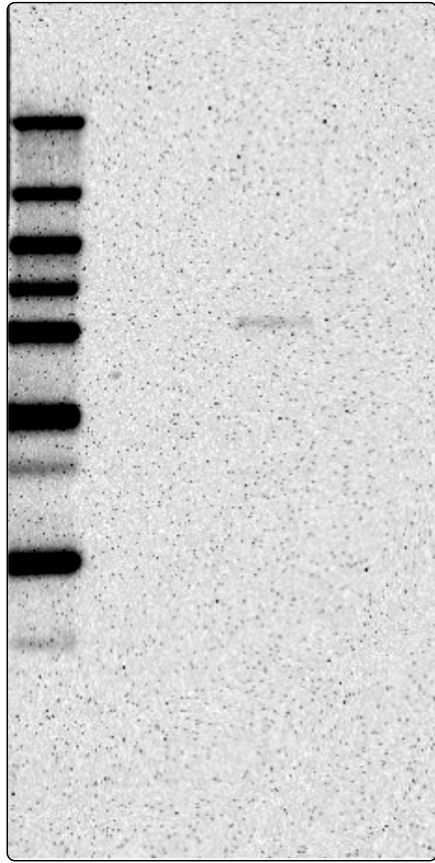
<b>IHC protocol:</b>	HIER pH6, Dilution 1:250
<b>IHC test staining:</b>	Weak cytoplasmic positivity in a subset of immune cells in tonsil. Remaining tissues were negative.
<b>Literature conformance:</b>	Partly consistent with gene/protein characterization data
<b>Literature significance:</b>	Limited
<b>RNA consistency:</b>	Not consistent with RNA expression data
<b>IHC Sibling similarity:</b>	Other antibody shows dissimilar IHC staining pattern
<b>IHC fail comment:</b>	ANTIBODY FAILED: Unspecific staining, Not consistent with RNA

## Immunofluorescence



<b>IF Overlay:</b>	antibody (green), anti-tubulin (red) and DAPI (blue)
<b>IF main location:</b>	
<b>IF additional location:</b>	
<b>IF Antibody score:</b>	Failed IF
<b>IF in GAMG:</b>	Negative
<b>IF in REH:</b>	Negative
<b>IF in U-2 OS:</b>	Negative

# Western blot



<b>WB Size markers (kDa):</b>	250, 130, 100, 70, 55, 35, 25, 15, 10
<b>WB Lanes:</b>	Marker (1), RT4 (2), U-251 MG (3), Plasma (4), Liver (5), Tonsil (6)
<b>WB Target weight (kDa):</b>	72, 76, 78
<b>WB Validation:</b>	Supported (Single band corresponding to the predicted size in kDa (+/-20%.))