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TAP1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6252a

Specification

TAP1 Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q03518
Other Accession	Q96CP4
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**80965**
Antigen Region	**765-794**

TAP1 Antibody (C-term) - Additional Information

Gene ID 6890

Other Names
Antigen peptide transporter 1, APT1, ATP-binding cassette sub-family B member 2, Peptide supply factor 1, Peptide transporter PSF1, PSF-1, Peptide transporter TAP1, Peptide transporter involved in antigen processing 1, Really interesting new gene 4 protein, TAP1, ABCB2, PSF1, RING4, Y3

Target/Specificity
This TAP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 765-794 amino acids from the C-terminal region of human TAP1.

Dilution
WB~~1:2000
IHC-P~~1:50~100
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
TAP1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

TAP1 Antibody (C-term) - Protein Information

Name TAP1 {ECO:0000303|PubMed:10605026, ECO:0000312|HGNC:HGNC:43}

Function ABC transporter associated with antigen processing. In complex with TAP2 mediates unidirectional translocation of peptide antigens from cytosol to endoplasmic reticulum (ER) for loading onto MHC class I (MHCI) molecules (PubMed:25377891, PubMed:25656091). Uses the chemical energy of ATP to export peptides against the concentration gradient (PubMed:25377891). During the transport cycle alternates between 'inward-facing' state with peptide binding site facing the cytosol to 'outward-facing' state with peptide binding site facing the ER lumen. Peptide antigen binding to ATP-loaded TAP1-TAP2 induces a switch to hydrolysis-competent 'outward-facing' conformation ready for peptide loading onto nascent MHCI molecules. Subsequently ATP hydrolysis resets the transporter to the 'inward facing' state for a new cycle (PubMed:11274390, PubMed:25377891, PubMed:25656091). Typically transports intracellular peptide antigens of 8 to 13 amino acids that arise from cytosolic proteolysis via IFNG-induced immunoproteasome. Binds peptides with free N- and C-termini, the first three and the C-terminal residues being critical. Preferentially selects peptides having a highly hydrophobic residue at position 3 and hydrophobic or charged residues at the C-terminal anchor. Proline at position 2 has the most destabilizing effect (PubMed:11274390, PubMed:7500034, PubMed:9256420). As a component of the peptide loading complex (PLC), acts as a molecular scaffold essential for peptide-MHCI assembly and antigen presentation (PubMed:1538751, PubMed:25377891, PubMed:26611325).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein. Note=The transmembrane segments seem to form a pore in the membrane

Tissue Location
Highly expressed in professional APCs monocytes and dendritic cells as well as in lymphocyte subsets T cells, B cells and NK cells.

TAP1 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TAP1 Antibody (C-term) - Images

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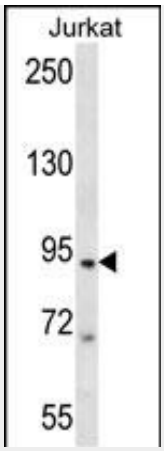
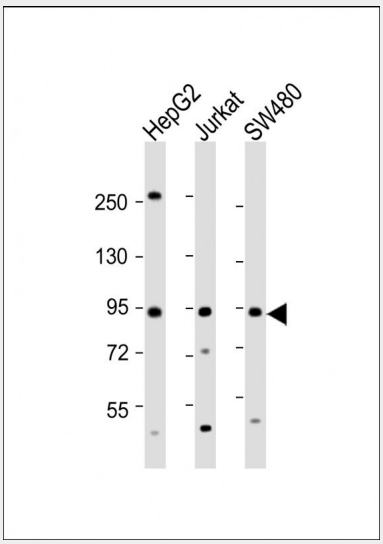
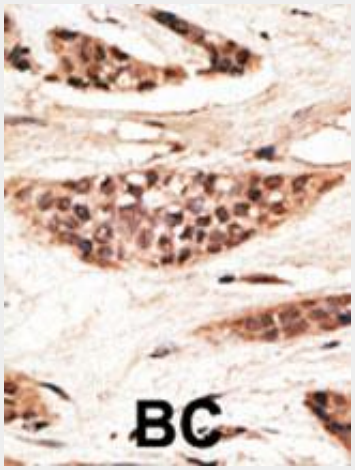


TAP1 Antibody (I795) (Cat. #AP6252a) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the TAP1 antibody detected the TAP1 protein (arrow).



All lanes : Anti-TAP1 Antibody (C-term) at 1:2000 dilution Lane 1: HepG2 whole cell lysate Lane 2: Jurkat whole cell lysate Lane 3: SW480 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 87 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data

demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

TAP1 Antibody (C-term) - Background

TAP is an integral transmembrane protein involved in the transport of antigens from the cytoplasm to the endoplasmic reticulum for association with MHC class I molecules. It 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. TAP is inhibited by the covalent attachment of herpes simplex virus ICP47 protein, which blocks the peptide-binding site of TAP. It is inhibited by human cytomegalovirus US6 glycoprotein, which binds to the lumenal side of the TAP complex and inhibits peptide translocation by specifically blocking ATP-binding to TAP and prevents the conformational rearrangement of TAP induced by peptide binding. TAP is also inhibited by human adenovirus E3-19K glycoprotein, which binds the TAP complex and acts as a tapasin inhibitor, preventing MHC class I/TAP association. Expression of TAP is down-regulated by human Epstein-barr virus vIL-10 protein, thereby affecting the transport of peptides into the endoplasmic reticulum and subsequent peptide loading by MHC class I molecules. TAP1 and TAP2 form a heterodimer of TAP1 and TAP2, and the peptide-binding site is shared between the cytoplasmic loops of TAP1 and TAP2. TAP, inducible by interferon gamma, belongs to the ABC transporter family, MDR subfamily.

TAP1 Antibody (C-term) - References

Lajoie, J., et al., Hum. Immunol. 64(8):823-829 (2003).
Gaudet, R., et al., EMBO J. 20(17):4964-4972 (2001).
Tang, J., et al., Hum. Immunol. 62(3):256-268 (2001).
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Bennett, E.M., et al., J. Immunol. 162(9):5049-5052 (1999).