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TAP2 Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22307a

Specification

TAP2 Antibody (N-Term) - Product Information

Application	**WB, FC,E**
Primary Accession	Q03519
Reactivity	**Human**
Host	**Rabbit**
Clonality	**polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**75664**

TAP2 Antibody (N-Term) - Additional Information

Gene ID 6891

Other Names
Antigen peptide transporter 2, APT2, ATP-binding cassette sub-family B member 3, Peptide supply factor 2, Peptide transporter PSF2, PSF-2, Peptide transporter TAP2, Peptide transporter involved in antigen processing 2, Really interesting new gene 11 protein, TAP2, ABCB3, PSF2, RING11, Y1

Target/Specificity
This TAP2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 100-134 amino acids from the human region of human TAP2.

Dilution
WB~~1:2000
FC~~1:25

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
TAP2 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

TAP2 Antibody (N-Term) - Protein Information

Name TAP2 {ECO:0000303|PubMed:10605026, ECO:0000312|HGNC:HGNC:44}

Function ABC transporter associated with antigen processing. In complex with TAP1 mediates

unidirectional translocation of peptide antigens from cytosol to endoplasmic reticulum (ER) for loading onto MHC class I (MHCI) molecules (PubMed:25656091, PubMed:25377891). 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:25377891, PubMed:25656091, PubMed:11274390). 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:7500034, PubMed:9256420, PubMed:11274390). As a component of the peptide loading complex (PLC), acts as a molecular scaffold essential for peptide-MHCI assembly and antigen presentation (PubMed:26611325, PubMed:1538751, PubMed:25377891).

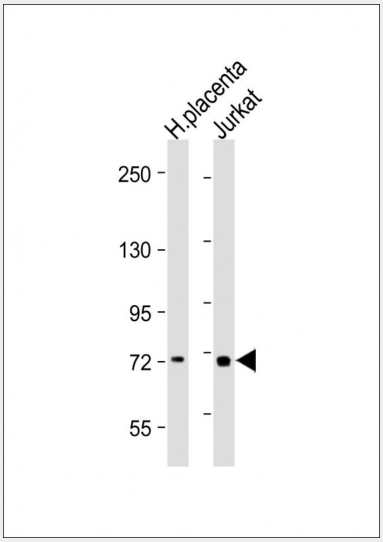
Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein. Note=The transmembrane segments seem to form a pore in the membrane

TAP2 Antibody (N-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

TAP2 Antibody (N-Term) - Images



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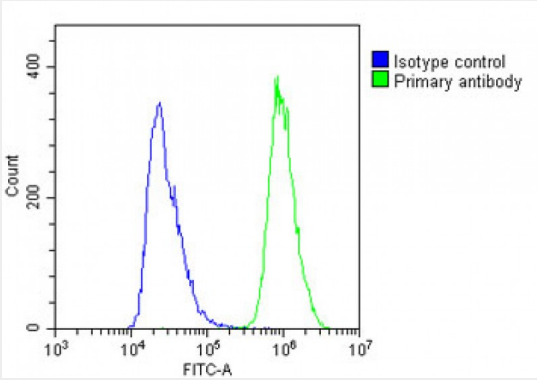
All lanes : Anti-TAP2 Antibody (N-Term) at 1:2000 dilution Lane 1: Human placenta lysate Lane 2: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 76 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Overlay histogram showing A431 cells stained with AP22307a(green line). The cells were fixed with 2% paraformaldehyde and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed at 1/200 dilution for 40 min at Room temperature. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

TAP2 Antibody (N-Term) - Background

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 lumenal 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.

TAP2 Antibody (N-Term) - References

Beck S.,et al.J. Mol. Biol. 228:433-441(1992).
Powis S.H.,et al.Proc. Natl. Acad. Sci. U.S.A. 89:1463-1467(1992).
Bahram S.,et al.Proc. Natl. Acad. Sci. U.S.A. 88:10094-10098(1991).
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Kumagai S.,et al.Arthritis Rheum. 40:1685-1692(1997).