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TAP1 Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF2832a

Specification

TAP1 Antibody (internal region) - Product Information

Application	**WB, E**
Primary Accession	Q03518
Other Accession	NP_000584.2, 6890
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**80965**

TAP1 Antibody (internal region) - 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

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
TAP1 Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

TAP1 Antibody (internal region) - 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 (internal region) - 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 (internal region) - Images

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AF2832a (1 µg/ml) staining of MCF7 lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

TAP1 Antibody (internal region) - References

Identification of domain boundaries within the N-termini of TAP1 and TAP2 and their importance in tapasin binding and tapasin-mediated increase in peptide loading of MHC class I Procko E, Raghuraman G, Wiley DC, Raghavan M, Gaudet R Immunol Cell Biol. 2005 Oct;83(5):475-82 PMID: 16174096