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# Anti-TAP1 Picoband Antibody

Catalog # ABO12509

## Product Information

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| **Application** | WB, IHC-P |
| **Primary Accession** | Q03518 |
| **Host** | Rabbit |
| **Reactivity** | Human |
| **Clonality** | Polyclonal |
| **Format** | Lyophilized |
| **Description** | Rabbit IgG polyclonal antibody for Antigen peptide transporter 1(TAP1) detection. Tested with WB, IHC-P in Human. |
| **Reconstitution** | Add 0.2ml of distilled water will yield a concentration of 500ug/ml. |

## Additional Information

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| **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 |
| **Calculated MW** | 80965 |
| **Application Details** | Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, By Heat<br><br>Western blot, 0.1-0.5 □g/ml, Human |
| **Subcellular Localization** | Endoplasmic reticulum membrane; Multi-pass membrane protein. The transmembrane segments seem to form a pore in the membrane. |
| **Source** | Eukaryota |
| **Protein Name** | Antigen peptide transporter 1 |
| **Contents** | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3. |
| **Immunogen** | A synthetic peptide corresponding to a sequence in the middle region of human TAP1 (438-471aa RSFANEEGEAQKFREKLQEIKTLNQKEAVAYAVN), different from the related mouse sequence by eight amino acids, and from the related rat sequence by nine amino acids. |
| **Purification** | Immunogen affinity purified. |

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| **Cross Reactivity** | No cross reactivity with other proteins |
| **Storage** | At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing. |

## Protein Information

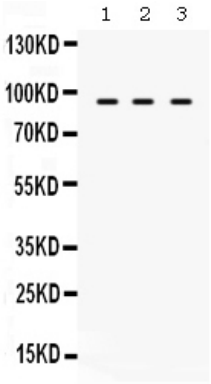
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|---|---|
| **Name** | TAP1 {ECO:0000303\|PubMed:10605026, ECO:0000312\|HGNC:HGNC:43} |
| **Function** | ABC transporter associated with antigen processing. In complex with TAP2 mediates unidirectional translocation of peptide antigens from cytosol 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. |

## Background

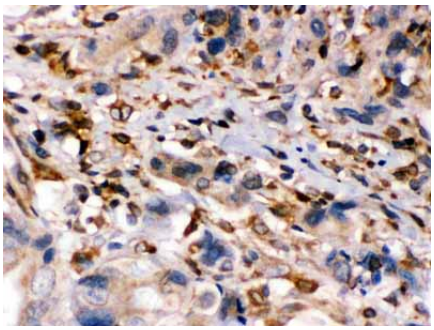
Transporter associated with Antigen Processing 1 is a protein that in humans is encoded by the TAP1 gene. The membrane-associated protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. And ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MDR/TAP subfamily. Members of the MDR/TAP subfamily are involved in multidrug resistance. The protein encoded by this gene is involved in the pumping of degraded cytosolic peptides across the endoplasmic reticulum into the membrane-bound compartment where class I molecules assemble. Mutations in this gene may be associated with ankylosing spondylitis, insulin-dependent diabetes mellitus, and celiac disease. Two transcript variants encoding different isoforms have been found for this gene.

## Images

Anti- TAP1 Picoband antibody, ABO12509, Western blottingAll lanes: Anti TAP1 (ABO12509) at 0.5ug/mlLane




1: HELA Whole Cell Lysate at 40ugLane 2: HUT Whole Cell Lysate at 40ugLane 3: SW620 Whole Cell Lysate at 40ugPredicted bind size: 87KDObserved bind size: 87KD



Anti- TAP1 Picoband antibody, ABO12509, IHC(P)IHC(P): Human Intestinal Cancer Tissue

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.