

Datasheet for ABIN7562964  
**TAP1 Protein (AA 1-724) (His tag)**



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## Overview

|                               |   |
|-------------------------------|---|
| Quantity:                     | 1 mg  |
| Target:                       | TAP1  |
| Protein Characteristics:      | AA 1-724                                    |
| Origin:                       | Mouse                                       |
| Source:                       | HEK-293 Cells                               |
| Protein Type:                 | Recombinant                                 |
| Purification tag / Conjugate: | This TAP1 protein is labelled with His tag. |

## Product Details

|           |   |
|-----------|---|
| Purpose:  | Custom-made recombinant Tap1 Protein expressed in mammalian cells.  |
| Sequence: | MAAHVWLAAA LLLLVDWLLL RPMLPGIFSL LVPEVPLLRV WVGLSRWAI LGLGVRGVLG<br>VTAGAHGWLA ALQPLVAALS LALPGLALFR ELAAWGTLRE GDSAGLLYWN SRPDAFAISY<br>VAALPAAALW HKLGSLWAPS GNRDAGDMLC RMLGFLGPKK RRLYLVLVLL ILSCLGEMAI<br>PFFTGRITDW ILQDKTVPSF TRNIWLMSIL TIASTALEFA SDGIYNITMG HMHGRVHREV<br>FRAVLRQETG FFLKNPAGSI TSRVTEDTAN VCESISGTLS LLLWYLGRAL CLLVFMFWGS<br>PYLTLVTLIN LPLLFLLPKK LGKVHQSLAV KVQESLAKST QVALEALSAM PTVRSFANEE<br>GEAQKFRQKL EEMKTLNKKE ALAYVAEVT TSVSGMLLKV GILYLGGLV IRGAVSSGNL<br>VSFVLYQLQF TQAVQVLLSL YPSMQKAVGS SEKIFEYLDR TPCSPLSGSL APSNMKGLVE<br>FQDVSFAYPN QPKVQVLQGL TFTLHPGTVT ALVGPNGSGK STVAALLQNL YQPTGGQLL<br>DGQCLVQYDH HYLHTQVA AV GQEPLLFGRS FRENIAVGLN RTPTMEEITA VAVESGAHDF<br>ISGFPPQGYDT EVGETGNQLS GGQRQAVALA RALIRKPLLL ILDDATSALD AGNQLRVQRL<br>LYESPKRASR TVLLITQQLS LAEQAHHILF LREGSVGEQG THLQLMKRGG CYRAMVEALA APAD |

**Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

**Specificity:** If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

**Characteristics:** Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

**Purity:** > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)

**Grade:** custom-made

## Target Details

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**Target:** TAP1

**Alternative Name:** Tap1 ([TAP1 Products](#))

**Background:** Antigen peptide transporter 1 (APT1) (EC 7.4.2.14) (ATP-binding cassette sub-family B member 2) (Histocompatibility antigen modifier 1) (Peptide transporter TAP1),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. Uses the chemical energy of ATP to export peptides against the concentration gradient. 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

## Target Details

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hydrolysis-competent 'outward-facing' conformation ready for peptide loading onto nascent MHCII molecules. Subsequently ATP hydrolysis resets the transporter to the 'inward facing' state for a new cycle. As a component of the peptide loading complex (PLC), acts as a molecular scaffold essential for peptide-MHCII assembly and antigen presentation. {ECO:0000250|UniProtKB:Q03518}.

Molecular Weight: 78.9 kDa

UniProt: [P21958](#)

Pathways: [Regulation of Leukocyte Mediated Immunity](#), [Positive Regulation of Immune Effector Process](#), [Human Leukocyte Antigen \(HLA\) in Adaptive Immune Response](#)

## Application Details

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Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months