

## Product datasheet for **RC222668**

### **TAP2 (NM\_018833) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	TAP2 (NM_018833) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TAP2
Synonyms:	ABC18; ABCB3; APT2; D6S217E; PSF-2; PSF2; RING11
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC222668 representing NM\_018833  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGCGGCTCCCTGACCTGAGACCCTGGACCTCCCTGCTGCTGGTGGACGCGGCTTTACTGTGGCTGCTTC  
AGGGCCCTCTGGGACTTTGCTTCTCAAGGGCTGCCAGGACTATGGCTGGAGGGGACCCTGCGGCTGGG  
AGGGCTGTGGGGCTGCTAAAGCTAAGAGGGCTGCTGGGATTTGTGGGACACTGCTGCTCCCGCTCTGT  
CTGGCCACCCCTGACTGTCTCCCTGAGAGCCCTGGTCGCGGGGGCTCACGTGCTCCCCAGCCAGAG  
TCGCTTACAGCCCTTGGAGCTGGCTGCTGGTGGGTACGGGGCTGCGGGGCTCAGCTGGTCACTGTGGGC  
TGTTCTGAGCCCTCTGGAGCCAGGAGAAGGAGCAGGACCAGGTGAACAACAAAGTCTTGATGTGGAGG  
CTGCTGAAGCTCTCCAGGCCGACCTGCCTCTCCTCGTTGCCGCTTCTTCTTCTTGTCTTGTGTTTT  
TGGGTGAGACATTAATCCCTCACTATTCTGGTCGTGTGATTGACATCCTGGGAGGTGATTTTGACCCCA  
TGCTTTGCCAGTGCCATCTTCTCATGTGCCTTCTCCTTTGGCAGCTCACTGTCTGCAGGCTGCCGA  
GGAGGCTGCTTACCTACACCATGTCTCGAATCAACTTGGCGATCCGGGAGCAGCTTTTCTCCTCCCTGC  
TGCCCCAGGACCTCGTTTTCTCCAGGAGACTAAGACAGGGGAGCTGAACTCACGGCTGAGCTCGGATAC  
CACCTGATGAGTAACTGGCTTCTTTAAATGCCAATGTGCTCTTGCGAAGCCTGGTAAAGTGGTGGGG  
CTGTATGGCTTCACTGCTCAGCATATCGCCTCGACTCACCTCCTTTCTCTGCTGCACATGCCCTTCAAA  
TAGCAGCGGAGAAGGTGTACAACACCCGCCATCAGGAAGTGTTCGGGAGATCCAGGATGCACTGGCCAG  
GGCGGGCAGGTGGTGGGGAAGCCGTTGGAGGGCTGCAGACCCTTCCAGTGTGGGGCCGAGGAGCAT  
GAAGTCTGTGCTATAAAGAGGCCCTTGAACAATGTCGGCAGCTGTATTGGCGGAGAGACCTGGAACGCG  
CCTTGTACCTGCTCGTAAGGAGGTGCTGCACTTGGGGTGCAGATGCTGATGCTGAGCTGTGGGTGCA  
GCAGATGCAGGATGGGGAGCTCACCCAGGGCAGCCTGCTTCTTATGATCTACCAGGAGAGCGTGGGG  
AGCTATGTGCAGACCCTGGTATACATATATGGGATATGCTCAGCAACGTGGGAGCTGCAGAGAAGTTTT  
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TGTGAAATCCAAGACGTCTCCTTTGCATATCCCAATCGCCTGACAGGCCTGTGCTCAAGGGGCTGACG  
TTTACCCTACGCTCCTGGTGGGTGACGGCGCTGGTGGACCCAATGGGTCTGGGAAGAGCACAGTGGCTG  
CCCTGCTGCAGAACTGTACCAGCCACAGGGGACAGGTGCTGCTGGATGAAAAGCCCATCTCACAGTA  
TGAACACTGCTACCTGCACAGCCAGGTGGTTTCAGTTGGCAGGAGCCTGTGCTGTTCTCCGTTCTGTG  
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ACGCAGATGACTTCATCCAGGAAATGGAGCATGGAATATACACAGATGTAGGGGAGAAGGAAGCCAGCT  
GGCTGCGGGACAGAAACACGTCTGGCCATTGCCCGGGCCCTTGTACGAGACCCGCGGTCTCATCCTG  
GATGAGGCTACTAGTGCCCTAGATGTGCAGTGCAGCAGGCCAAAACCTTTGGAAGTTCATGATATTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTAA

Protein Sequence: >RC222668 representing NM\_018833  
 Red=Cloning site Green=Tags(s)

MRLPDLRPWTSLLL VDAALLWLLQGPLGTL LPQGLPGLWLEGLRLGGLWGLLKL RGLLGFVGTLLPLC  
 LATPLTVSLRALVAGASRAPPARVASAPSWLL VGYGAAGLSWSLWAVL SPPGAQEKEQDQVNNKVL MWR  
 LLKLSRPDLPLLVAFFFLVLA VLGETLIPHYSGRVIDILGGDFDPHAFASAIFFMCLFSFGSSLSAGCR  
 GGCFYTM SRINLRIREQLFSSLLRQDLGFFQETKTGELNSRLSSDTTLM SNWLP LNANVLLRSLVKVVG  
 LYGFMLSISPRLTLLSLLHMPFTIAAEKVYNTRHQEVLREIQDAVARAGQV VREAVGGLQTVRSFGAEEH  
 EVCRYKEALEQCRQLYWRDLERALYLLVRRVLHLGVQMLMLSCGLQMQDGELTQGSLLSFM IYQESVG  
 SYVQTLVYIYGDMLSNVGA AEKVF SYMDRQPNLPSPGTLAPTTLQGVVKFQDV SFAYPNRPDRPV LKGLT  
 FTLRPGEVTALVGPNGSGKSTVAALLQNL YQPTGGQVLLDEKPI SQYEHCYLHSQV VSVGQEPV LFSGSV  
 RNNIAYGLQSCEDDKVMAAAQA AHADDFIQEME HGIYTDVGEKGSQ LAAGQKQLA IARALVRDPRV LIL  
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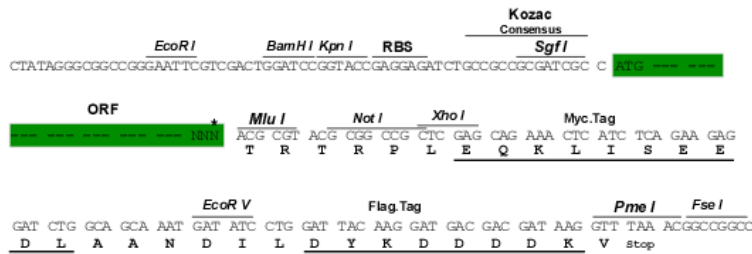
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk8009\\_h04.zip](https://cdn.origene.com/chromatograms/mk8009_h04.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

ACCN: NM\_018833

ORF Size: 1959 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_018833.2](#), [NP\\_061313.2](#)

**RefSeq Size:** 2540 bp

**RefSeq ORF:** 1962 bp

**Locus ID:** 6891

**UniProt ID:** [Q03519](#)

**Cytogenetics:** 6p21.32

**Domains:** ABC\_membrane, ABC\_tran, AAA

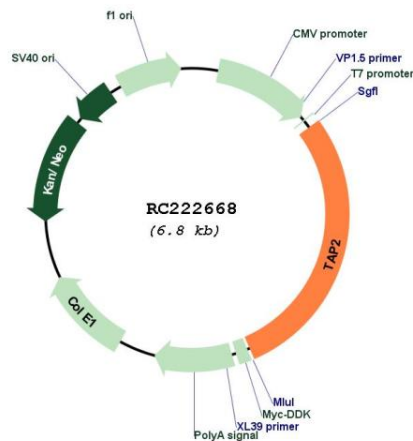
**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** ABC transporters, Antigen processing and presentation, Primary immunodeficiency

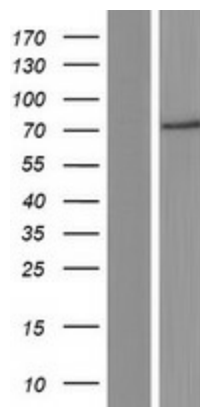
**MW:** 71.8 kDa

**Gene Summary:**

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. 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. This gene is located 7 kb telomeric to gene family member ABCB2. The protein encoded by this gene is involved in antigen presentation. This protein forms a heterodimer with ABCB2 in order to transport peptides from the cytoplasm to the endoplasmic reticulum. Mutations in this gene may be associated with ankylosing spondylitis, insulin-dependent diabetes mellitus, and celiac disease. Alternative splicing of this gene produces products which differ in peptide selectivity and level of restoration of surface expression of MHC class I molecules. [provided by RefSeq, Feb 2014]

**Product images:**


Circular map for RC222668



Western blot validation of overexpression lysate (Cat# [LY412873]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222668 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).