

## Product datasheet for **MR216038**

### Tnpo1 (NM\_178716) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Tnpo1 (NM_178716) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tnpo1
Synonyms:	AU021749; D13Ertd688e; IPO2; Kpnb2; MIP; MIP1; TRN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>MR216038 representing NM\_178716  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGTGTGGGACCGCAAACCAAGATGGAGTATGAGTGGAAACCTGACGAGCAAGGGCTTCAGCAGATCC  
 TGCAGCTGCTCAAGGAGTCCCAGTCCCCAGACACCACCATCCAGAGGACCGTGCAACAAAACTGGAACA  
 ACTCAATCAATATCCAGATTTTAACTACTTGTATTTTGTCTTACAAAATTAATCTGAAGATGAG  
 CCCACACGGTCATTGAGCGGTCTGATCTTGAAGAACAATGTGAAAGCTCATTTTCAGAACTCCCAAATG  
 GTGTGACAGACTTCATCAAGAGTGAATGTCTAAATAACATTGGGGACTCCTCCTCGTTGATCAGAGCCAC  
 TGTGCGTATTTAATTACAACCATAGCCTCAAGGGAGAGCTGCAGAATTGGCCTGATCTTACAAAA  
 CTCTGTAGCCTGCTGGATTCCGAAGACTACAACACTTGTGAGGGAGCCTTCGGTGCCTTCAGAAGATAT  
 GTGAGGACTCTGCAGAGATTTAGACAGTGTCTTAGATCGCCCTCTCAACATCATGATCCCCAAGTT  
 TTTACAGTTTTTCAAGCACAGCAGTCCAAAATAAGGTCTCATGTGTTGCATGTGTCAATCAGTTCATC  
 ATCAGTCGGACCCAGGCGCTCATGCTGCACATCGATTCCCTCATTGAGAACCTCTTTCAGCTGGCTGGCG  
 ACGAGGAAGCAGAGGTGCGGAAGAACGTGTGCCGGGCGCTTGTGATGTTGCTTGAAGTCCGGATGGATCG  
 CCTGCTTCTCATATGCACAACATAGTCGAGTACATGCTGCAGAGAACCCAAAGACCAAGATGAGAATGTA  
 GCTCTGGAGGCCTGTGAATTCGGCTGACTTTGGCTGAACAGCCAATATGCAAAGATGACTTGTAAAGGC  
 ATCTACCAAAGTTGATTCTGTGTTAGTGAATGGCATGAAGTACTCAGATATAGATATTCTGCTTAA  
 GGGTGTGTTGAGGAAGATGAGACCATCCCGGATAGTGAAGGATATACGGCCGCGGTTTCATCGCTCG  
 AGGACAGTGGCTCAGCAGCATGAGGAGGATGGGATTGAGGAGGAAGACGATGATGACGAAATGATG  
 ATGATGACACGATTTCTGACTGGAACCTGAGAAGTGTCTGCTGCTCCTCGATGTTCTCGAAATGT  
 TTATCGTGATGAGCTTTTGCCGCACATTCGCCACTTTTGAAAGAATTGCTTTTCCATCATGAATGGGTT  
 GTGAAAGAATCTGGCATCTTGGTTTTAGGAGCAATTGCTGAAGGTTGTATGCAAGGCATGATTCCGTACC  
 TGCCCGAGCTCATTCTCACCTTATTAGTGCCTTTCTGATAAAAAGGCTCTTGTGCGTTCATCACCTG  
 CTGGACTCTTAGCCGCTATGCACACTGGGTAGTCAGCCAGCCACCAGATACGTACCTGAAGCCATTAATG  
 ACAGAAGTGTGAAGCGTATCCTCGATAGCAACAAGAGAGTACAGGAAGCAGCTTGCAGTGCCTTCGCTA  
 CATTAGAAGAGGAGGCTTGTACAGAGCTCGTCCCTTACCTTGCTTATATACTCGATACCCTCGTCTTCGC  
 CTTTCAGTAAATACCAGCATAAAGAACCTGCTCATTCTGTACGACGCCATAGGGACTGGCAGATTCAGTG  
 GGACATCATTTAAACAAGCCAGAATATATTCAGATGCTAATGCCTCCTTTGATCCAGAAATGGAACATGC  
 TGAAGGATGAAGACAAGGATCTTTCCCTTTGCTTGTGAGTGTCTCTCGTCTGTTGCCACAGCCTTGCAGTC  
 TGGCTTCCCTCCATATTGTGAACCTGTATATCAGCGTTGCGTAAACCTAGTTCAGAAGACTCTGGACAA  
 GCCATGCTAAACAATGCTCAACCAGAACAGTATGAAGTCCAGATAAAGATTTTATGATTGTGGCTCTTG  
 ACTTACTCAGCGGCTGGCTGAGGGCCTGGGAGGCAACATTGAGCAGCTGGTGGCCCGCAGTAACATCCT  
 GACGCTGATGTACCAGTGCATGCAGGATAAAATGCCCGAGGTTCCGGCAGAGTCTTTTGCATTGTAGGT  
 GACCTGACTAAAGCGTCTTCCAGCATGTTAAGCCTTGTATAGCTGATTTTCATGCCAATATTGGGAACCA  
 ATCTAAATCCAGAGTTTATTTTCAGTCTGCAACAATGCCACCTGGGCGATTGGGGAATATCAATCCAAAT  
 GGGTATAGAGATGCAGCCCTACATCCCTATGGTGTGCACCAGCTTGTGGAGATCATTAAACAGACCCAAC  
 ACCCAAAGACGCTGTTGGAGAACACAGCAATAACAATTGGTCGCTTGGTTACGTTTGTCTCAAGAGG  
 TGGCCCCATGCTACAGCAGTTTATAAGACCCTGGTGTACCTCTGAGAAACATAAGAGACAATGAAGA  
 AAAAGATTGAGCATTCCGTGGGATTTGTACCATGATCAGTGTGAATCCCAGTGGCGTAATCCAAGATTTT  
 ATATTTTTTTGTGATGCTGTTGCATCATGGATTAACCCAAAAGATGATCTCAGAGACATGTTCTGTAAGA  
 TCCTTCATGGATTTAAAACCAAGTTGGGGATGAAAATGGAGGCGATTCTGACCAGTTTCTCTTCC  
 CTTAAAAGAGCGTCTTGCAGCTTTTATGGTGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR216038 representing NM\_178716  
 Red=Cloning site Green=Tags(s)

MVWDRQTKMEYEWKPDEQGLQQILQLLKESQSPDTTIQRVQQKLEQLNQYPDFNNYLIFVLTCLKSEDE  
 PTRSL SGL I L K N N V K A H F Q N F P N G V T D F I K S E C L N N I G D S S P L I R A T V G I L I T T I A S K G E L Q N W P D L L P K  
 L C S L L D S E D Y N T C E G A F G A L Q K I C E D S A E I L D S D V L D R P L N I M I P K F L Q F F K H S S P K I R S H A V A C V N Q F I  
 I S R T Q A L M L H I D S F I E N L F A L A G D E E A E V R K N V C R A L V M L L E V R M D R L L P H M H N I V E Y M L Q R T Q D Q D E N V  
 A L E A C E F W L T L A E Q P I C K D V L V R H L P K L I P V L V N G M K Y S D I D I I L L K G D V E E D E T I P D S E Q D I R P R F H R S  
 R T V A Q Q H E E D G I E E E D D D D E I D D D D T I S D W N L R K C S A A A L D V L A N V Y R D E L L P H I L P L L K E L L F H H E W V  
 V K E S G I L V L G A I A E G C M Q G M I P Y L P E L I P H L I Q C L S D K K A L V R S I T C W T L S R Y A H W V S Q P P D T Y L K P L M  
 T E L L K R I L D S N K R V Q E A A C S A F A T L E E E A C T E L V P Y L A Y I L D T L V F A F S K Y Q H K N L L I L Y D A I G T L A D S V  
 G H H L N K P E Y I Q M L M P P L I Q K W N M L K D E D K D L F P L L E C L S S V A T A L Q S G F L P Y C E P V Y Q R C V N L V Q K T L A Q  
 A M L N N A Q P E Q Y E A P D K D F M I V A L D L L S G L A E G L G G N I E Q L V A R S N I L T L M Y Q C M Q D K M P E V R Q S S F A L L G  
 D L T K A C F Q H V K P C I A D F M P I L G T N L N P E F I S V C N N A T W A I G E I S I Q M G I E M Q P Y I P M V L H Q L V E I I N R P N  
 T P K T L L E N T A I T I G R L G V V C P Q E V A P M L Q Q F I R P W C T S L R N I R D N E E K D S A F R G I C T M I S V N P S G V I Q D F  
 I F F C D A V A S W I N P K D D L R D M F C K I L H G F K N Q V G D E N W R R F S D Q F L P L K E R L A A F Y G V

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mm9033\\_h07.zip](https://cdn.origene.com/chromatograms/mm9033_h07.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



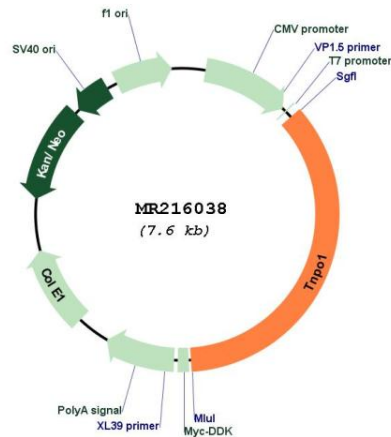
\* The last codon before the Stop codon of the ORF

ACCN: NM\_178716

<b>ORF Size:</b>	2694 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_178716.3</a> , <a href="#">NP_848831.2</a>
<b>RefSeq Size:</b>	5391 bp
<b>RefSeq ORF:</b>	2697 bp
<b>Locus ID:</b>	238799
<b>UniProt ID:</b>	<a href="#">Q8BFY9</a>
<b>Cytogenetics:</b>	13 52.24 cM
<b>MW:</b>	102.8 kDa

**Gene Summary:**

Functions in nuclear protein import as nuclear transport receptor. Serves as receptor for nuclear localization signals (NLS) in cargo substrates (PubMed:11493596). Is thought to mediate docking of the importin/substrate complex to the nuclear pore complex (NPC) through binding to nucleoporin and the complex is subsequently translocated through the pore by an energy requiring, Ran-dependent mechanism. At the nucleoplasmic side of the NPC, Ran binds to the importin, the importin/substrate complex dissociates and importin is re-exported from the nucleus to the cytoplasm where GTP hydrolysis releases Ran. The directionality of nuclear import is thought to be conferred by an asymmetric distribution of the GTP- and GDP-bound forms of Ran between the cytoplasm and nucleus (By similarity). Involved in nuclear import of M9-containing proteins. In vitro, binds directly to the M9 region of the heterogeneous nuclear ribonucleoproteins (hnRNP), A1 and A2 and mediates their nuclear import. Appears also to be involved in hnRNP A1/A2 nuclear export. Mediates the nuclear import of ribosomal proteins RPL23A, RPS7 and RPL5. Binds to a beta-like import receptor binding (BIB) domain of RPL23A (By similarity). In vitro, mediates nuclear import of SRP19 (By similarity). Mediates the import of histones H2A, H2B, H3 and H4 (PubMed:11493596). Mediates nuclear import of ADAR/ADAR1 in a RanGTP-dependent manner (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for MR216038