

## Product datasheet for **MG221966**

### **Tpx2 (NM\_001141976) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Tpx2 (NM_001141976) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Tpx2
Synonyms:	2610005B21Rik; DIL2; p100; REPP86
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide  
Sequence:

>MG221966 representing NM\_001141976  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGTCACAAGTCCCTACTACTTACTCTTTTCGATGCCCCACCGACTTTATCAATTTTTCATCTTTGGATG  
CTGAAGAGGATACTGAAAATATAGACTCATGGTTTGATGAGAAGGCCAACTTGGAGAACAAGTTTCTTCG  
ACAGAGGGGAATAGGCGAGCCTTTTCAGGGGAAGAATTCCTTGAGAAAAGCCAACTTCAACAGGGCTTC  
GTCACACCGTTGAAGGCAGTTGACAACACTTACCACAAAGAGACAGAAAAGGAAAATCTTCAGAAACAGT  
CTATCCCATCAAATGATTGTTCTCCCTGGATGCTAAGAGAGCTGTATCAGGAAATACTCTGTCCAGCC  
TCAGAGAAGATCTATTAGACTCTCTGCTCAGAAGGATTTGGAGCAGAAAGAGAAAACCATGTTGCCTCT  
GTTGAAATGAAAGCCAAGAGATGTGTTGCTCCGGCCACTGATTGTCCCCCAGAAAAGAATGAAAGTTT  
CTGATAAAAAGAACTGGAGGAAGAGGAGGAAGGCAGTGTCCAGCTACTCAAGAAAGAATGAAAGAGA  
AACCTTGAGAAAAGCCAAGGGCAAGCACACTGTGCCAGGTGTGCCACCTGCAAGGGAGAAGTTCTAAAG  
AGTACTGAGGAGCAGGAGATAGAGAAAAGGCTGCGGATGCAGCAGGAGGTGGTGGAGCTGCGCAGGAAAA  
ACGAAGAGTTCAAGAAGCTCGCGCTCGCAGGGCCAGGGCAACCTGTGAAGAAGTCCACGAGCCAGGTTAC  
CAAGACAGTTGACTTTCCTCACAGATGAGCGAATCAAGCAACATCCCAAGAACCAGGAAGAGTAT  
AAGGAAGTGAAGTTCATGCTGAACTTCGGAAGCATTCTCCACGCTGCCCGAGGAACCAGAGGATGCA  
CTATCATTAAAGCCTTCAACCTGTCAAAGGGAAGAAAAGAACATTTGATGAAGCAGCTTCTACGTATGT  
GCCCATGACAGCAGGTTGAAGCCTTCCACAACGAACCCCAATAGATACCATCTGAGGAACAAGAAG  
GACGAGAGCTTGTACCTCCTCAATCTGTGAACAAGATTGCACGAGACCCCGAGACCCCATACTGCAGA  
CCAAATATCGTACAAGGGCTGTGACTTGCAAAAGTACTGCAGAGCAGGAGGCCGAGGAGCTTGAGAAA  
GCAACAATACAAATTCAAAGCACGGGAACCTGATCCTAGAAATTTTGAAGTGGCCCATCTTGCCCAAG  
AGAGCACCTGTTAAACCTCCTACTCAGCCTGTTGGTTTTGATTTGAAAATTGAGAAAAGCAATTCATGAGC  
GAGAGTCAAAGAAAAACAGAAGATGAACAATTTGAATTTCTAGACCTTGTCTACTAAGATCTT  
GGAAGATGTCGTGGGTGTTCTGAAAAGAAGGTAATTCAGTACTGTCCCGAAGTCGCCAGTTTTTGCA  
TTGAAGAACAGGATCCGAGTGCCCATCAAAGATGAGGAAGAGGAGAAACCAGTAGTGATAAAAGCTCAAC  
CTGTGCCACATTATGGGGTGCCTTATAAGCCCCACATCGCAGAGGCAAGAAATGTGGAGGTGTGCCCGTT  
CTCCTTTGATACCCGGGACAAAGAACGCCAGTTGCAGAAGGAGAAAAAATAAAAGAGATGCAGAAAGGG  
GAGGTGCCCAAGTTCAAGGCACTTCTGTGCCCATTTTGACACCATTACCTGCCAGAGAAAAAGGTAA  
AGAACGTGACTCAAGCTGAGCCTTCTCCTGGAGACAGACAAGAGAGGCGCCTACAAGGCTGAGATGTG  
GAAGCACCAGCTGGAGGAAGAGCAGAAGCAGCAGAAGGACGCGCTTGCTTCAAGGCTCGTCCAAACACC  
GTCATCTTCCAAGAGCCCTTCGTTCCCAAGAAGGAGAAAAATCACTGGCTGAGAACCCTTCTGGTTCTC  
TAGTTCAGGAACCTTTTCAGCTGCCACCAGAGAGGAGCCAAAGAGCGGCAGGAGCTGGAGAAGAAAAT  
GGCTGAAGTAGAGGCTGGAAACTGCAGCAGTTGGAGGAAGTCAGGCAGCAGGAAGAGGAGCAGCAGAAG  
GAGGAGTTAGCCAGGCTCCGAAAGAACTGGTGCACAAGGCAATCCAATACGGAAGTACGCAGCAGTGG  
AGGTGAAATCTAGCGAGCTGCCTCTGACTGTCCGGTGTCTCCTAAGTTCTCCACTCGGTTCCAG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >MG221966 representing NM\_001141976  
 Red=Cloning site Green=Tags(s)

MSQVPTTYSFDAPTDFFINFSLLDAEEDTENIDSWFDEKANLENKFLRQRGIGEPFQGNLSLRKAKLQQGF  
 VTPLKAVDNTYHKETEKENLQKQSIPSNDCSSLDKRAVSGNTPVQPQRRSIRLSAQKDLEQKEKNHVAS  
 VEMKAKRCVAPATDCPPQKRMKVSDKKLEEEEGSAPATSRKNERETLEKAKGKHTVPGVPPAREKVLK  
 STEEQEIEKRLRMQQEVVELRRKNEEFKKLALAGPGQPVKKSTSQVTKTVDFHFLTDERIKQHPKNQEEY  
 KEVNFMSSELRKHSSTPARGTRGCTIIPFNL SKGKKRTFDEAASYVPIAQQQVEAFHKRTPNRYHLRNKK  
 DESLLPSKSVNKIARDPQTPILQTKYRTRAVTCKSTAEQEAEELEKLQQYKFKARELDPRIFESGPILPK  
 RAPVKPPTQPVGFDLEIEKRIHERESKKKTEDEQFEFHSRPCPTKILEDVVGVPKEKVVIPATVPKSPVFA  
 LKNRIRVPIKDEEEKPVVIAKQPVPHYGVYPKPHIAEARNVEVCPFSFDTRDKERQLQKEKKIKEMQKG  
 EVPKFKALVPVPHFDINLPEKKVKNVTQAEFSLQETDKRGAYKAEMWKHQLQEEQKQKDAACFKARPNT  
 VIFQEPFVPKKEKSLAENPSGSLVQEPFQLATERRAKERQLEKKMAEVEAWKLQQLQEEVROQEEEQK  
 EELARLRKELVHKANPIRKYAAVEVKSSSELPLTVPVSPKFSTRFQ

TRTRPLE - GFP Tag - V

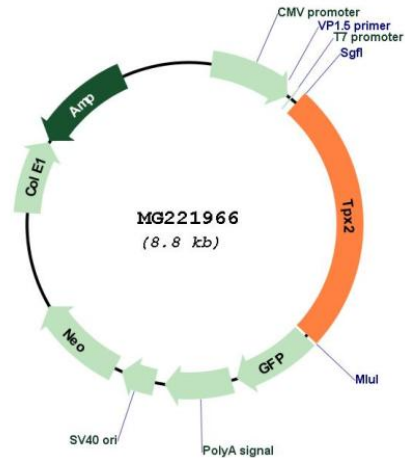
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



## Plasmid Map:



ACCN: NM\_001141976

ORF Size: 2235 bp

OTI Disclaimer: 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\\_001141976.1](#), [NP\\_001135448.1](#)

RefSeq Size: 4177 bp

RefSeq ORF: 2238 bp

Locus ID: 72119

UniProt ID: [A2APB8](#)

Cytogenetics: 2 H1

**Gene Summary:** Spindle assembly factor required for normal assembly of mitotic spindles. Required for normal assembly of microtubules during apoptosis. Required for chromatin and/or kinetochore dependent microtubule nucleation. Mediates AURKA localization to spindle microtubules. Activates AURKA by promoting its autophosphorylation at 'Thr-288' and protects this residue against dephosphorylation. TPX2 is inactivated upon binding to importin-alpha. At the onset of mitosis, GOLGA2 interacts with importin-alpha, liberating TPX2 from importin-alpha, allowing TPX2 to activates AURKA kinase and stimulates local microtubule nucleation.[UniProtKB/Swiss-Prot Function]