

## Product datasheet for **MG221968**

### **Tpx2 (NM\_001141977) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Tpx2 (NM_001141977) 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)



[View online »](#)

**ORF Nucleotide Sequence:**

>MG221968 representing NM\_001141977  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGTCACAAGTCCCTACTACTTACTCTTTTCGATGCCCCACCGACTTTATCAATTTTTCATCTTTGGATG  
 CTGAAGAGGATACTGAAAATATAGACTCATGGTTTGATGAGAAGGCCAACTTGGAGAACAAGTTTCTTCG  
 ACAGAGGGGAATAGGCGAGCCTTTTCAGGGGAAGAATTCCTTGAGAAAAGCCAACTTCAACAGGGCTTC  
 GTCACACCGTTGAAGGCAGTTGACAACACTTACCACAAAGAGACAGAAAAGGAAAATCTTCAGAAACAGT  
 CTATCCCATCAAATGATTGTTCTCCCTGGATGCTAAGAGAGCTGTATCAGGAAATACTCTGTCCAGCC  
 TCAGAGAAGATCTATTAGACTCTCTGCTCAGAAGGATTTGGAGCAGAAAGAGAAAACCATGTTGCCTCT  
 GTTGAAATGAAAGCCAAGAGATGTGTTGCTCCGGCCACTGATTGTCCCCCAGAAAAGAATGAAAGTTT  
 CTGATAAAAAGAACTGGAGGAAGAGGAGGAAGGCAGTGTCCAGCTACTTCAAGAAAAGAAATGAAAGAGA  
 AACCTTGAGAAAAGCCAAGGGCAAGCACACTGTGCCAGGTGTGCCACCTGCAAGGGAGAAGTTCTAAAG  
 AGTACTGAGGAGCAGGAGATAGAGAAAAGGCTGCGGATGCAGCAGGAGGTGGTGGAGCTGCGCAGGAAAA  
 ACGAAGAGTTCAAGAAGCTCGCGCTCGCAGGGCCAGGGCAACCTGTGAAGAAGTCCACGAGCCAGGTTAC  
 CAAGACAGTTGACTTTCACTTCCCTCACAGATGAGCGAATCAAGCAACATCCCAAGAACCAGGAAGAGTAT  
 AAGGAAGTGAAGTTCATGTCTGAACTTCGGAAGCATTCTCCACGCTGCCCGAGGAACCAGAGGATGCA  
 CTATCATTAAAGCCTTTCAACCTGTCAAAGGGAAGAAAAGAACATTTGATGAAGCAGCTTCTACGTATGT  
 GCCCATGACAGCAGGTTGAAGCCTTCCACAACGAACCCCAATAGATACCATCTGAGGAACAAGAAG  
 GACGAGAGCTTGTACCTCCTCAATCTGTGAACAAGATTGCACGAGACCCCGAGACCCCATACTGCAGA  
 CCAAATATCGTACAAGGGCTGTGACTTGCAAAAGTACTGCAGAGCAGGAGGCCGAGGAGCTTGAGAAA  
 GCAACAATACAAATTCAAAGCACGGGAACCTGATCCTAGAAATTTTGAAGTGGCCCATCTTGCCCAAG  
 AGAGCACCTGTTAAACCTCCTACTCAGCCTGTTGGTTTTGATTTGAAAATTGAGAAAACGAATTCATGAGC  
 GAGAGTCAAAGAAAAACAGAAGATGAACAATTTGAATTTCTAGACCTTGTCTACTAAGATCTT  
 GGAAGATGTCGTGGGTGTTCTGAAAAGAAGGTAATTCAGTACTGTCCCGAAGTCGCCAGTTTTTGCA  
 TTGAAGAACAGGATCCGAGTGCCATCAAAGATGAGGAAGAGGAGAAACCAGTAGTGATAAAAGCTCAAC  
 CTGTGCCACATTATGGGGTGCCTTATAAGCCCCACATCGCAGAGGCAAGAAATGTGGAGGTGTGCCCGTT  
 CTCCTTTGATACCCGGGACAAAGAACGCCAGTTGCAGAAGGAGAAAAAATAAAAGAGATGCAGAAAGGG  
 GAGGTGCCAAGTCAAGGCACTTCTGTGCCCATTTTGACACCATTACCTGCCAGAGAAAAAGGTAA  
 AGAACGTGACTCAAGCTGAGCCTTCTCCTGGAGACAGACAAGAGAGGCGCCTACAAGGCTGAGATGTG  
 GAAGCACCAGCTGGAGGAAGAGCAGAAGCAGCAGAAGGACGCGCTTGCTTCAAGGCTCGTCCAAACACC  
 GTCATCTTCCAAGAGCCCTTCGTTCCCAAGAAGGAGAAAAATCACTGGCTGAGAACCCTTCTGGTTCTC  
 TAGTTCAGGAACCTTTTCAGCTGCCACCAGAGAGGAGAGCCAAAGAGCGGCAGGAGCTGGAGAAGAAAAT  
 GGCTGAAGTAGAGGCTGGAAACTGCAGCAGTTGGAGGAAGTCAAGCAGCAGGAAGAGGAGCAGCAGAAG  
 GAGGAGTTAGCCAGGCTCCGAAAGAAGTGGTGCACAAGGCAATCCAATACGGAAGTACGCAGCAGTGG  
 AGGTGAAATCTAGCGAGCTGCCTCTGACTGTGCCGGTGTCTCCTAAGTTCTCCACTCGGTTCCAG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

Protein Sequence: >MG221968 representing NM\_001141977  
 Red=Cloning site Green=Tags(s)

MSQVPTTYSFDAPTDFFINFSSLDAAEDTENIDSWFDEKANLENKFLRQRGIGEPFQGNLSLRKAKLQQGF  
 VTPLKAVDNTYHKETEKENLQKQSI PSNDCSSLDAKRAVSGNTPVQPQRRSIRLSAQKDLEQKEKNHVAS  
 VEMKAKRCVAPATDCPPQKRMKVSDKKLEEEEGSAPATSRKNERETLEKAKGKHTVPGVPPAREKVLK  
 STEEQEIEKRLRMQQEVVELRRKNEEFKKLALAGPGQPVKKSTSQVTKTVDFHFLTDERIKQHPKNQEEY  
 KEVNFMSELRKHSSTPARGTRGCTI IKPFNL SKGKKRTFDEAASYVPIAQQQVEAFHKRTPNRYHLRNKK  
 DESLLPSKSVNKIARDPQTPI LQTKYRTRAVTCKSTAEQEAEELEKLQQYKFKARELDPRI FESGPILPK  
 RAPVKPPTQPVGFDLEIEKRIHERESKKKTEDEQFEFHSRPCPTKILEDVVGVPKVKVIPATVPKSPVFA  
 LKNRIRVPIKDEEEKPVV IKAQPVPHYGVYPKPHIAEARNVEVCPFSFDTRDKERQLQKEKKIKEMQKG  
 EVPKFKALVPVPHFDINLPEKKVKNVTQAEF SLETDKRGAYKAEMWKHQL EEEQKQKDAACFKARPNT  
 VIFQEPFVPKKEKSLAENPSGSLVQEPFQLATERRAKERQELEKKMAEVEAWKLQQL EEVROQEEEQK  
 EELARLRKELVHKANPIRKYAAVEVKSSSELPLTVPVSPKFSTRFQ

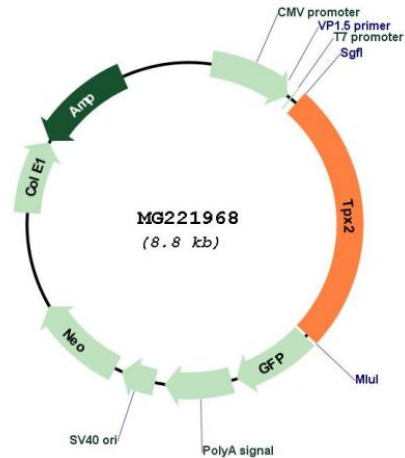
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



**Plasmid Map:**


**ACCN:** NM\_001141977

**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\\_001141977.1](#), [NP\\_001135449.1](#)

**RefSeq Size:** 4365 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 activate AURKA kinase and stimulates local microtubule nucleation.[UniProtKB/Swiss-Prot Function]