

Product datasheet for **MR210424**

Tpx2 (NM_001141978) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tpx2 (NM_001141978) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tpx2
Synonyms:	2610005B21Rik; DIL2; p100; REPP86
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR210424 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCACAAGTCCCTACTACTTACTCTTTTCGATGCCCCACCAGCTTTATCAATTTTTCATCTTTGGATG
 CTGAAGAGGATACTGAAAATATAGACTCATGGTTTGATGAGAAGGCCAACTTGGAGAACAAGTTTCTTCG
 ACAGAGGGGAATAGGCGAGCCTTTTCAGGGGAAGAATTCCTTGAGAAAAGCCAACTTCAACAGGGCTTC
 GTCACACCCTGAAGGCAGTTGACAACACTTACCACAAAGAGACAGAAAAGGAAAATCTTCAGAAACAGT
 CTATCCCACAAATGATTGTTCTCCCTGGATGCTAAGAGAGCTGTATCAGGAAATACTCTGTCCAGCC
 TCAGAGAAGATCTATTAGACTCTCTGCTCAGAAGGATTTGGAGCAGAAAGAGAAAACCATGTTGCCTCT
 GTTGAAATGAAAGCCAAGAGATGTGTTGCTCCGGCCACTGATTGTCCCCCAGAAAAGAATGAAAGTTT
 CTGATAAAAAGAACTGGAGGAAGAGGAGGAAGGCAGTGTCCAGCTACTTCAAGAAAGAATGAAAGAGA
 AACCTTGAGAAAAGCCAAGGGCAAGCACACTGTGCCAGGTGTGCCACCTGCAAGGGAGAAGTTCTAAAG
 AGTACTGAGGAGCAGGAGATAGAGAAAAGGCTGCGGATGCAGCAGGAGGTGGTGGAGCTGCGCAGGAAAA
 ACGAAGAGTTCAAGAAGCTCGCGCTCGCAGGGCCAGGGCAACCTGTGAAGAAGTCCACGAGCCAGGTTAC
 CAAGACAGTTGACTTTCCTTCCCTCACAGATGAGCGAATCAAGCAACATCCCAAGAACCAGGAAGAGTAT
 AAGGAAGTGAAGTTCATGCTGAACTTCGGAAGCATTCTCCACGCTGCCCGAGGAACCAGAGGATGCA
 CTATCATTAAAGCCTTCAACCTGTCAAAGGGAAGAAAAGAACATTTGATGAAGCAGCTTCTACGTATGT
 GCCCATTCACAGCAGGTTGAAGCCTTCCACAACGAACCCCAATAGATACCATCTGAGGAACAAGAAG
 GACGAGAGCTTGTACCTCCTCAATCTGTGAACAAGATTGCACGAGACCCCGAGACCCCATAGTGCAGA
 CCAAATATCGTACAAGGGCTGTGACTTGCAAAGTACTGCAGAGCAGGAGGCCGAGGAGCTTGAGAAAAC
 GCAACAATACAAATTCAAAGCACGGGAACCTTGATCCTAGAAATTTTGAAGTGGCCCATCTTGCCCAAG
 AGAGCACCTGTTAAACCTCCTACTCAGCCTGTTGGTTTTGATTTGAAAATTGAGAAAAGCAATTCATGAGC
 GAGAGTCAAAGAAAAACAGAAGATGAACAATTTGAATTTCTAGACCTTGTCTACTAAGATCTT
 GGAAGATGTCGTGGGTGTTCTGAAAAGAAGGTAATTCAGTACTGTCCCGAAGTCGCCAGTTTTTGCA
 TTGAAGAACAGGATCCGAGTGCCCATCAAAGATGAGGAAGAGGAGAAACCAGTAGTGATAAAAGCTCAAC
 CTGTGCCACATTATGGGGTGCCTATAAGCCCCACATCGCAGAGGCAAGAAATGTGGAGGTGTGCCCGTT
 CTCCTTTGATACCCGGGACAAAGAACGCCAGTTGCAAGGAGAGAAAAAATAAAAGAGATGCAGAAAGGG
 GAGGTGCCAAGTCAAGGCACTTCTGTGCCCATTTTGACACCATTAACTGCCAGAGAAAAAGGTAA
 AGAACGTGACTCAAGCTGAGCCTTCTCCTGGAGACAGACAAGAGAGGCGCCTACAAGGCTGAGATGTG
 GAAGCACCAGCTGGAGGAAGAGCAGAAGCAGCAGAAGGACGCGCTTGCTTCAAGGCTCGTCCAAACACC
 GTCATCTTCCAAGAGCCCTTCGTTCCCAAGAAGGAGAAAAATCACTGGCTGAGAACCCTTCTGGTTCTC
 TAGTTCAGGAACCTTTTCAGCTGCCACCAGAGAGGAGAGCCAAAGAGCGGCAGGAGCTGGAGAAGAAAAT
 GGCTGAAGTAGAGGCTGGAAACTGCAGCAGTTGGAGGAAGTCAAGCAGCAGGAAGAGGAGCAGCAGAAG
 GAGGAGTTAGCCAGGCTCCGAAAGAACTGGTGCACAAGGCAATCCAATACGGAAGTACGCAGCAGTGG
 AGGTGAAATCTAGCGAGCTGCCTCTGACTGTGCCGGTGTCTCCTAAGTTCTCCACTCGGTTCCAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR210424 protein sequence
Red=Cloning site Green=Tags(s)

MSQVPTTYSFDAPTDFFINFSSSLDAEEDTENIDSWFDEKANLENKFLRQRGIGEPFQGNLSLRKAKLQQGF
 VTPLKAVDNTYHKETEKENLQKQSIPSNDCSSLDKRAVSGNTPVQPQRRSIRLSAQKDLEQKEKNHVAS
 VEMKAKRCVAPATDCPPQKRMKVSDKKLEEEEGSAPATSRKNERETLEKAKGKHTVPGVPPAREKVLK
 STEEQEIEKRLRMQQEVVELRRKNEEFKKLALAGPGQPVKKSTSQVTKTVDFHFLTDERIKQHPKNQEEY
 KEVNFMSSELRKHSSTPARGTRGCTIIPFNL.SKGKKRTFDEAASYVPIAQQVEAFHKRTPNRYHLRNKK
 DESLLPSKSVNKIARDPQTPILOTKYRTRAVTCKSTAEQEAEELEKLQQYKFKARELDPRIFESGPILPK
 RAPVKPPTQPVGFDLEIEKRIHERESKKKTEDEQFEFHSRPCPTKILEDVVGVEPKKVIPATVPKSPVFA
 LKNRIRVPIKDEEEKPVVIAKQVPVPHYGVYPKPHIAEARNVEVCPFSFDTRDKERQLQKEKKIKEMQKG
 EVPKFKALVPHFDITINLPEKKVKNVTQAEFSLKTDKRGAYKAEMWKHQLQEEQKQKDAACFKARPNT
 VIFQEPFVPKKEKSLAENPSGSLVQEPFLATERRAKERQELEKKMAEVEAWKLQQLLEEVROQEEEQK
 EELARLRKELVHKANPIRKYAAEVKSSSELPLTPVSPKFSTRFQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001141978

ORF Size: 2238 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_001141978.1](#), [NP_001135450.1](#)

RefSeq Size: 4164 bp

RefSeq ORF: 2238 bp

Locus ID: 72119

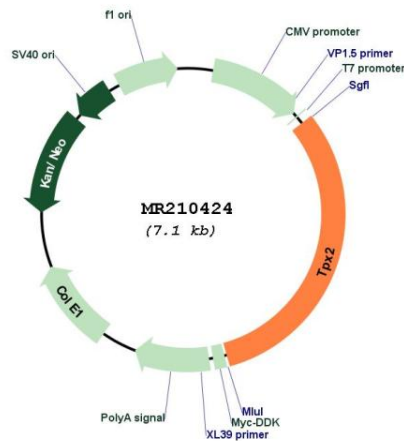
UniProt ID: [A2APB8](#)

Cytogenetics: 2 H1

MW: 85.9 kDa

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]

Product images:



Circular map for MR210424