

Product datasheet for **RC205821**

TPX2 (NM_012112) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TPX2 (NM_012112) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TPX2
Synonyms:	C20orf1; C20orf2; DIL-2; DIL2; FLS353; GD:C20orf1; HCA519; HCTP4; p100; REPP86
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC205821 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCACAAGTTAAAAGCTCTTATTCCTATGATGCCCCCTCGGATTTTCATCAATTTTTCATCCTTGGATG
 ATGAAGGAGATACTCAAAACATAGATTCATGGTTTGAGGAGAAGGCCAATTTGGAGAATAAGTTACTGGG
 GAAGAATGGAAGCTGGAGGGCTTTTTTCAGGGCAAACTCCTTTGAGAAAAGGCTAATCTTCAGCAAGCTATT
 GTCACACCTTTGAAACCAGTTGACAACCTTACTACAAAGAGGCAGAAAAAGAAAATCTTGTGGAACAAT
 CCATTCGGTCAAATGCTTGTCTTCCCTGGAAAGTTGAGGCAGCCATATCAAGAAAACTCCAGCCCAGCC
 TCAGAGAAGATCTCTTAGGCTTCTGCTCAGAAGGATTTGGAACAGAAAAGAAAGCATCATGAAAAATG
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 ACAACAAAAAGAACCCAGAGGAAGAAGGCAGTGCATCAAGATACTGCTGAAAAGAATGCATCTTCCCC
 AGAGAAAGCCAAGGGTAGACATACTGTGCCTTGTATGCCACCTGCAAAGCAGAAGTTTCTAAAAAGTACT
 GAGGAGCAAGAGCTGGAGAAGAGTATGAAAATGCAGCAAGAGGTGGTGGAGATGCCGAAAAAGAATGAAG
 AATTCAAGAAACTTGCTCTGGCTGGAATAGGGCAACCTGTGAAGAAATCAGTGAGCCAGGTCACCAAATC
 AGTTGACTTCCACTTCCGCACAGATGAGCGAATCAAACAACATCCTAAGAACCAGGAGGAATATAAGGAA
 GTGAACCTTACATCTGAACTACGAAAGCATCCTTCATCTCCTGCCGAGTGACTAAGGGATGTACCATTG
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 TGCACAGCAAGTTGAAGACTTCCATAACGAACCCCTAACAGATATCATTTGAGGAGCAAGAAGGATGAT
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 CCAAACACCGTGCACGGCTGTGACCTGCAAAAAGTACAGCAGAGCTGGAGGCTGAGGAGCTCGAGAAAAT
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 GAGAATCAAAGAAGAAAACAGAGGATGAACACTTTGAATTTTATTCCAGACCTTGCCTACTAAGATTTT
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 TTGAAGAACAGAAATCGAATGCCACCAAAAGAAGATGAGGAAGAGGACGAACCGGTAGTGATAAAAGCTC
 AACCTGTGCCACATTATGGGGTGCCTTTAAGCCCCAAATCCCAGAGGCAAGAAGTGTGAAATATGCC
 TTTCTCGTTTGATTCTCGAGACAAAGAAGTACAGTACAGAAAGGAGAAGAAAATAAAAGAAGTGCAGAAA
 GGGGAGGTGCCAAGTTCAAGGCACTTCCCTTGCCTCATTTTGACACCTAACCTGCCAGAGAAGAAGG
 TAAAGAATGTGACCCAGATTGAACCTTTCTGCTTGGAGACTGACAGAAGAGGTGCTCTGAAGGCACAGAC
 TTGGAAGCACCAGCTGGAAGAAGAACTGAGACAGCAGAAAAGAAGCAGCTTGTTTCAAGGCTCGTCCAAAC
 ACCGTCATCTCTCAGGAGCCCTTTGTTCCCAAGAAAGAGAAGAAATCAGTTGCTGAGGGCCTTTCTGGTT
 CTCTAGTTCAGGAACCTTTTTCAGCTGGCTACTGAGAAGAGAGCCAAAGAGCGGCAGGAGCTGGAGAAGAG
 AATGGCTGAGGTAGAAGCCAGAAAGCCAGCAGTTGGAGGAGGCCAGACTACAGGAGGAAGAGCAGAAA
 AAAGAGGAGCTGGCCAGGCTACGGAGAGAACTGGTGCATAAGGCAATCCAATACGCAAGTACCAGGGTC
 TGGAGATAAAGTCAAGTGACCAGCCTCTGACTGTGCCTGTATCTCCAAATCTCCACTCGATTCCAAGT
 C

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC205821 protein sequence
 Red=Cloning site Green=Tags(s)

MSQVKSSYSYDAPSDFINFSSLDDEGDTQNIIDSWFEKANLENKLLGKNGTGGLFQGKTPLRKANLQQAIVTPLKPDNTYYKEAKENLVEQSI PSNACSSLEVEAAISRKTPAQPRRSLRLSAQKDLQEKHHVKMKAKRRCATPVIIDEILPSKMKMVSNNKKKPEEEGSAHQDTAEKNASSPEKAKGRHTVPCMPPAKQKFLKSTEEQELEKSMKMQQEVVEMRKKNEEFKLLALAGIGQPVKKSVSQVTKSVDFHFRTDERIKQHPKNQEYKEVNFTSELRKHPSPARVTKGCTIVKPFNLSQGKKRTFDETVSTYVPLAQQVEDFHKRTPNRYHLRSKKDDINLLPSKSSVTIKCRDPQTPVLQTKHRARAVTCKSTAELEAELEKLQYKFKARELDPRILEGGPILPKPPVKKPPTTEPIGFDLEIEKRIQERESKKKTEDEHFEFHSRPCPTKILEDVVGVPKPKVLPITVPKSPAFA LKNRIRMPKTEDEEEDPVVIAKAQVPVPHYGVFPKQIPEARTVEICPFSFDSRDKERQLQKKEKIKELQKGEVPKFKALPLPHFDTINLPEKKVKNVTQIEPFCLDTRRGALKAQTWKHQLEELRQQKEAACFKARPN TVISQEPFVPKKEKKSVAEGLSGSLVQEPFQLATEKRAKERQELEKRMAEVEAQKAQQLEEARLQEEEQKKEELARLRREL VHKANPIRKYQGLEIKSSDQPLTVPVSPKFSTRFHC

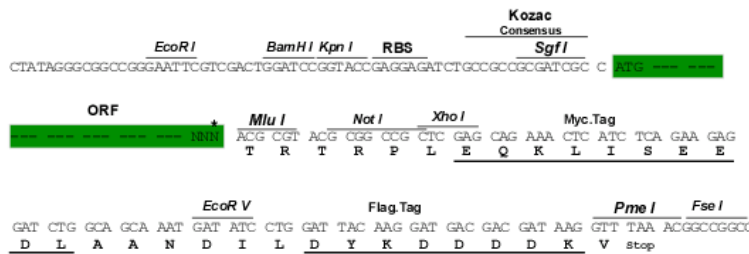
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6066_a05.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_012112

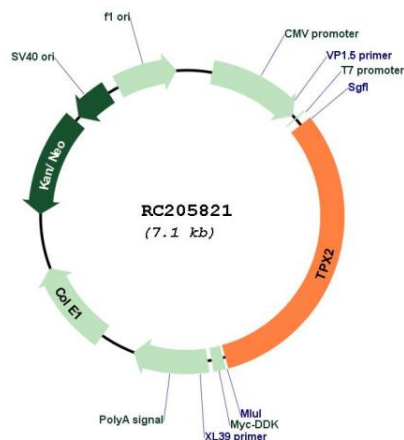
ORF Size: 2241 bp

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](#)

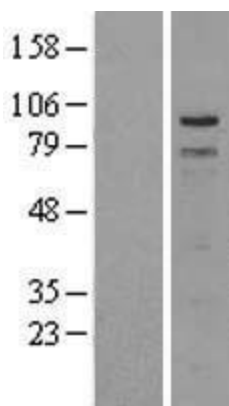
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<ol style="list-style-type: none">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:	<u>NM_012112.5</u>
RefSeq Size:	3685 bp
RefSeq ORF:	2244 bp
Locus ID:	22974
UniProt ID:	<u>Q9ULW0</u>
Cytogenetics:	20q11.21
Protein Families:	Druggable Genome, Stem cell - Pluripotency
MW:	85.7 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 (PubMed:18663142, PubMed:19208764). Activates AURKA by promoting its autophosphorylation at 'Thr-288' and protects this residue against dephosphorylation (PubMed:18663142, PubMed:19208764). TPX2 is inactivated upon binding to importin-alpha (PubMed:26165940). 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 (PubMed:26165940).[UniProtKB/Swiss-Prot Function]

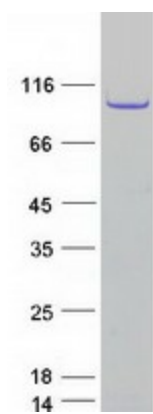
Product images:



Circular map for RC205821



Western blot validation of overexpression lysate (Cat# [LY415965]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205821 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TPX2 protein (Cat# [TP305821]). The protein was produced from HEK293T cells transfected with TPX2 cDNA clone (Cat# RC205821) using MegaTran 2.0 (Cat# [TT210002]).