

## Product datasheet for **RG209721**

### TPK1 (NM\_022445) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	TPK1 (NM_022445) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	TPK1
Synonyms:	HTPK1; PP20; THMD5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG209721 representing NM_022445 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAGCATGCCTTTACCCCGTTGGAGCCCCTGCTTTCCACTGGGAATTTGAAGTACTGCCTTGTAAATTC  
TTAATCAGCCTTTGGACAACTATTTTCGTCATCTTTGGAACAAAGCTCTTTAAGAGCCTGTGCCGATGG  
AGGTGCCAACCGCTTATGATATCACCGAAGGAGAGAGAGAAAGCTTTTGCCTGAATTCATCAATGGA  
GACTTTGATTCTATTAGCCTGAAGTCAGAGAATACTATGCTACTAAGGGATGTGAGCTCATTTCAACTC  
CTGATCAAGACCACACTGACTTTACTAAGTGCCTTAAATGCTCCAAAAGAAGATAGAAGAAAAAGACTT  
AAAGGTTGATGTGATCGTGACACTGGGAGGCCTTGCTGGGCGTTTTGACCAGATTATGGCATCTGTGAAT  
ACCTTGTTCCAAGCGACTCACATCACTCCTTTTCCAATTATAATAATCCAAGAGGAATCGCTGATCTACC  
TGCTCCAACCAGGAAAGCACAGGTTGCATGTAGACACTGGAATGGAGGGTGATTGGTGTGGCCTTATTCC  
TGTTGGACAGCCTTGTAGTCAGGTTACAACCACAGGCCTCAAGTGGAACTCACAAATGATGTGCTTGCT  
TTTGAACATTGGTCAGTACTTCCAATACCTACGACGGGTCTGGTGTGTGACTGTGAAACTGACCACC  
CACTCCTCTGGACCATGGCCATCAAAGC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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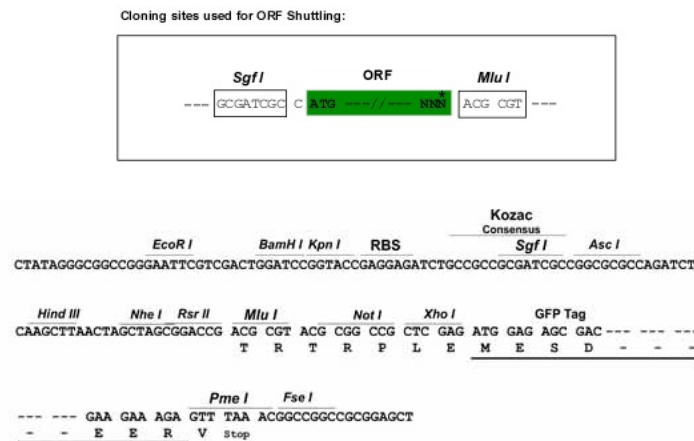
**Protein Sequence:** >RG209721 representing NM\_022445  
 Red=Cloning site Green=Tags(s)

MEHAFTPLEPLLSTGNLKYCLVILNQPLDNYFRHLWKNKALLRACADGGANRLYDITEGERESFLPEFING  
 DFDSIRPEVREYYATKGCELSTPDQDHTDFTKCLKMLQKKIEEKDLKVDVIVTLGGLAGRFDQIMASVN  
 TLFQATHITPFPPIIIIQEESLIYLLQPGKHLHVDTGMEGDWCGLIPVQGPCSQVTTTGLKWNLTNDVLA  
 FGTLVSTSNYDGSVVTVETDHPLLWTMAIKS

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_022445

**ORF Size:** 729 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\\_022445.3](#), [NP\\_071890.2](#)

**RefSeq Size:** 2449 bp

**RefSeq ORF:** 732 bp

**Locus ID:** 27010

**UniProt ID:** [Q9H3S4](#)

**Cytogenetics:** 7q35

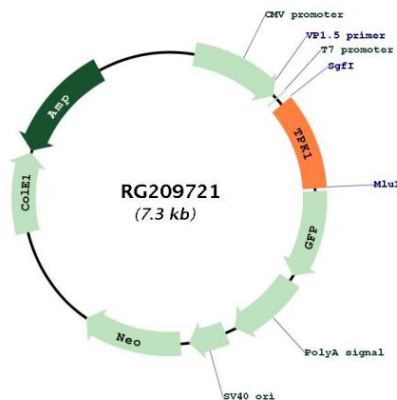
**Domains:** TPK\_catalytic, TPK\_B1\_binding

**Protein Families:** Druggable Genome

**Protein Pathways:** Metabolic pathways, Thiamine metabolism

**Gene Summary:** The protein encoded by this gene functions as a homodimer and catalyzes the conversion of thiamine to thiamine pyrophosphate, a cofactor for some enzymes of the glycolytic and energy production pathways. Defects in this gene are a cause of thiamine metabolism dysfunction syndrome-5. [provided by RefSeq, Apr 2017]

## Product images:



Circular map for RG209721