

## Product datasheet for **RC223375**

### THOC5 (NM\_003678) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	THOC5 (NM_003678) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	THOC5
Synonyms:	C22orf19; Fmip; fSAP79; PK1.3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RC223375 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTCATCAGAATCGAGCAAAAAACGGAAGCCCAAAGTGATCCGAAGCGATGGAGCCCCAGCTGAAGGAA  
 AGCGGAATCGATCTGACACCGAGCAGGAAGGTAATACTACAGTGAGGAGCCGAGGTGGATCTGCGGGA  
 CCCTGGCAGAGACTATGAGTTATACAAGTACACCTGCCAGGAGCTACAGAGGCTGATGGCTGAGATCCAA  
 GACCTGAAGAGCAGGGGTGGCAAGGATGTGGCAATAGAAATAGAAGAACGGAGGATCCAGAGCTGTGTGC  
 ATTTTCATGACTCTAAAGAAGCTTAACCGATTAGCCACATCAGGTTGAAGAAAGGAGAGATCAGACCCA  
 CGAGGCTAAGCAGAAAAGTAGATGCCTATCATCTGCAGCTCCAGAACCTGTTGTATGAGGTGATGCACCTA  
 CAGAAGGAGATCACCAATGTTTGGAGTTAAGTCAAAGCATGAAGAAATTGATCTGGTCAGTTTAGAGG  
 AGTTTTATAAGGAGGCTCCACCAGATATCAGCAAGGCCGAAGTCACCATGGGAGACCCCTACCAGCAAAC  
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 AACAAAGGAGAAGATTCTCAAGGAGATTGAGGTGAAGAAGGAGTACCTGAGCAGCCTCCAGCCCCGCCTCA  
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 GTATGAGACAGCCAGACACCTGCCGCCTCCCCTCTATGTCCTCTTTGTTCAAGCCACTGCGTATGGGCGAG  
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 CAGAGGACTCCCAAGATGACGAGAGTGAAGTGCAGATGCCGAGGAGGAGCAGACTACGAAGCGCCGGAGACC  
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 GACCTGAAGTGCAAAGATGACAGTGTGCTTACCTGACTTTCTACTACCTCATGAACCTCAACATCATGA  
 CAGTAAAAGCCAAAGTGACAACCTGCCATGGAGCTGATCACCCCATCAGTGCAGGTGACTTGTGTCTCC  
 TGACTCAGTCCTGAGTTGCTTGTATCCTGGGGATCATGGAAAGAAAACCTCCGAATCCAGCCAATCAGTAT  
 CAGTTTGATAAAGTTGGCATCCTGACTTTGAGCGACTATGTACTTGAGCTAGGTCACCCCTATTTGTGGG  
 TGCAGAAGCTGGGTGGCCTCCACTTCCCAAAGAGCAGCCCAGCAAACAGTGATTGCTGACCACTCGCT  
 GAGCGCCAGCCACATGGAGACCACCATGAAACTTCTGAAGACCAGGGTGCAGTCCCGCCTGGCCCTCCAC  
 AAACAGTTTGCATCCCTAGAACATGGCATTGTGCCAGTTACCAGTGATTGCCAGTACCTCTTCCCTGCCA  
 AGGTTGTCTCTCGCCTGGTGAATGGGTGACAGTTGCCCATGAGGATTACATGGAGCTGCACTTCACCAA  
 AGACATTGTGGATGCGGGACTGGCTGGGACACCAATCTCTACTACATGGCGCTCATCGAAAGGGGCACA  
 GCCAAACTGCAGGCCGCTGTGGTGTGAACCTGGCTACTCCTCCATCCCACCTGTTTTCCAGCTCTGTT  
 TGAAGTGGAAAGGGGAGAAAACCAACAGCAACGATGACAACATTCGGGCCATGGAGGGCGAAGTCAATGT  
 GTGCTACAAGGAGCTGTGTGGCCCTTGGCCAGCCACCAGCTGTTGACCAACCAGCTGCAGCGGCTGTGT  
 GTGCTGTGGATGTTTACCTGGAGACCGAGAGCCATGACGACAGTGTGGAGGGGCCCAAGGAATTTCCC  
 AGGAGAAGATGTGTCTCGGCTCTTCAGGGTCTTAGCAGGATGAAGCCATTTAAATACAACCATCTCA  
 GGGATTCTTCAGCCATCGC

**ACGCGT**ACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC223375 protein sequence  
Red=Cloning site Green=Tags(s)

```
MSESSKKRKP VIRSDGAPAEGRNRS DTEQEGKYYSEEAEVDLRDPGRDYELKY YTCQELQRLMAEIQ
DLKSRGGKDVAIEIEERRIQSCVHFMTLKKLNRLAHIRLKKGRDQTHEAKQKVDAYHLQLQNLLYEV MHL
QKEITKCLEFKSKHEEIDLVSLEEFYKEAPPDISKA EVTMGDPHQQTARLDWELERKRLAEKYRECLS
NKEKILKEIEVKKEYLSSLQPRLSIMQASLPVQEYLFMPFDQAHKQYETARHLPPPLYVLFVQATAYGQ
ACDKTLSVAIEGSVDEAKALFKPPEDSQDDESDSDAE EEQTTKRRRPTLGVQLDDKRKEMLKRHPLSVML
DLKCKDDSVLHHLTFYYLMNLNIMTVKAKVTTAMELITPISAGDLLSPDSVLSCLYPGDHGKKTNPANQY
QFDKVGILTLSDYVLELGHYPYLWVQKLGGLHFPKEQPQQTVIADHSL SASHMETTMKLLKTRVQSRLALH
KQFASLEHGIVPVTSDCQYLFPAKVVSRLVKWVTVAHEDY MELHFTKDIVDAGLAGDTNLYYMALIERGT
AKLQAAVVLNPGYSSIPPVFLCLNWKGEKTSNDDNIRAMEGEVNV CYKELCGPWPSHQLLTNQLQRLC
VLLDVYLETESHDDSVGPKFEPQEKMCLRLFRGPSRMKPFKYNHPQGFFSHR
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8104\\_a05.zip](https://cdn.origene.com/chromatograms/mk8104_a05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_003678

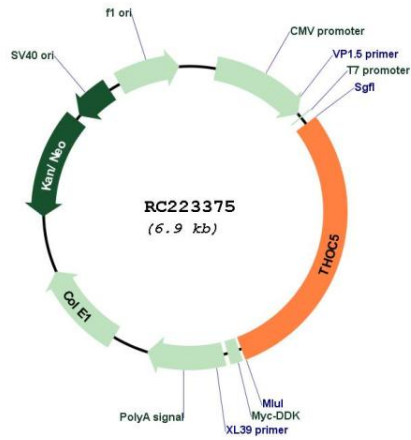
**ORF Size:** 2049 bp

**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.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_003678.5</u>
<b>RefSeq Size:</b>	2447 bp
<b>RefSeq ORF:</b>	2052 bp
<b>Locus ID:</b>	8563
<b>UniProt ID:</b>	<u>Q13769</u>
<b>Cytogenetics:</b>	22q12.2
<b>MW:</b>	78.5 kDa
<b>Gene Summary:</b>	Acts as component of the THO subcomplex of the TREX complex which is thought to couple mRNA transcription, processing and nuclear export, and which specifically associates with spliced mRNA and not with unspliced pre-mRNA. TREX is recruited to spliced mRNAs by a transcription-independent mechanism, binds to mRNA upstream of the exon-junction complex (EJC) and is recruited in a splicing- and cap-dependent manner to a region near the 5' end of the mRNA where it functions in mRNA export to the cytoplasm via the TAP/NFX1 pathway. The TREX complex is essential for the export of Kaposi's sarcoma-associated herpesvirus (KSHV) intronless mRNAs and infectious virus production. THOC5 in conjunction with ALYREF/THOC4 functions in NXF1-NXT1 mediated nuclear export of HSP70 mRNA; both proteins enhance the RNA binding activity of NXF1 and are required for NXF1 localization to the nuclear rim. Involved in transcription elongation and genome stability. Involved in alternative polyadenylation site choice by recruiting CPSF6 to 5' region of target genes; probably mediates association of the TREX and CFIm complexes.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RC223375