

## Product datasheet for **RC402387**

### Tuberin (TSC2) (NM\_000548) Human Mutant ORF Clone

#### Product data:

Product Type:	Mutant ORF Clones
Product Name:	Tuberin (TSC2) (NM_000548) Human Mutant ORF Clone
Mutation Description:	R751X
Affected Codon#:	751
Affected NT#:	2251
Nucleotide Mutation:	TSC2 Mutant (R751X), Myc-DDK-tagged ORF clone of Homo sapiens tuberous sclerosis 2 (TSC2), transcript variant 1 as transfection-ready DNA
Effect:	Tuberous sclerosis
Symbol:	Tuberin
Synonyms:	LAM; PPP1R160; TSC4
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000548
ORF Size:	2250 bp
Restriction Sites:	SgfI-XhoI



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**ORF Nucleotide Sequence:**

>RC402387 representing NM\_000548  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCCAAACCAACAAGCAAAGATTAGGCTTGAAGGAGAAGTTAAGATTCTGTTGGGACTGGGAACAC  
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 ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGGCAGATTTGTGAAGTCGCAAAAACC  
 AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTGCGGGATCTGTTGCAGCCGGAGCGGC  
 CGCTGGAGGCCCGGCACGCGGTCTGGCTCTGCTGAAGGCCATCGTGCAGGGCAGGGCAGCGTTTGGG  
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 AGAGCCTCCCGCTGTTTATCGTTACCCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG  
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 AAGGAGCTCCAGTGGTGGCGTGGGACATCTGCTGAACATCATCGAACGGCTCCTTCAAGAGCTCCAGA  
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 TCCTCCCTCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA  
 ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCCGAGGCGCCGTGCGCATCAAGGTGCTGGA  
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 CTCCCTCTCCCCACCCCGAGCTGGAAGAAAGGGATGTGGCCGATACTCGGCCTCCTTGGAGGATGTG  
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 GCTCTGAGAAGAAGACCAGCGGCCCTTTCTCCTCCACAGGGCCTCTGGCCCGGCGCTGCAGGCC  
 CGCCGTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTCCGCGTCTGCTGCAGTGTGTAAGCAGGAG  
 TCTGACTGGAAGGTGCTGAAGCTGGTTCTGGGCAGGCTGCCTGAGTCCCTGCGCTATAAAGTGTCTATCT  
 TTAATCCCCTTGCAGTGTGGACCAGCTGTGCTCTGCTCTGCTCCATGCTTTCAGGCCAAAGACACT  
 GGAGCGGCTC

**AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC**  
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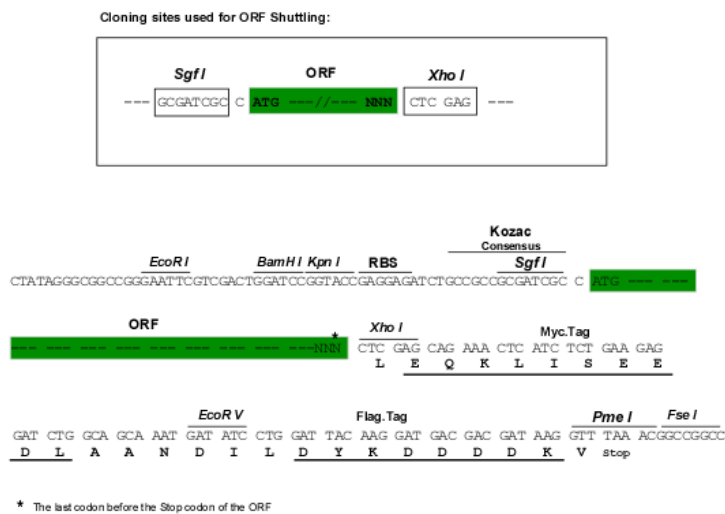
**Protein Sequence:** >RC402387 representing NM\_000548  
Red=Cloning site Green=Tags(s)

MAKPTSKDSSLKEKFKILLGLGTPRPNRPAEGKQTEFIITAEILRELSMECGLNNRIRMIGQICEVAKT  
 KKFEEHAVEALWKAVADLLQPERPLEARHAVLALLKAIVQGQGERLGLRALFFKVIKDYPNSNEDLHERL  
 EVFKALTDNGRHITYLEEELADFVLQWMDVGLSSEFLLVNLVKFNCSYLDEYIARMVQMICLLCVRTA  
 SSVDIIEVSLQVLDAVVCYNCLPAESLPLFIVTLCRTINVKELCEPCWKLMRNLLGTHLGHSAIYNMCHLM  
 EDRAYMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNEVVSYEIVLSITRLIKKYR  
 KELQVVAVDILLNIIERLLQQLQTLDSPELRTIVHDLTTVEELCDQNEFHGSQERYFELVERCADQRPE  
 SSSLNLSYRAQSIHPAKDGWIQNLQALMERFFRSESRGAVRIKVLVDVLSFVLLINRQFYEEELINSVVI  
 SQLSHIPEDKDHQVRKLATQLLVDLAEGCHTHHFNSLLDIIEKVMARSLSPPELEERDVAAYSASLEDV  
 KTAVLLGLLVILQTKLYLPASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLRADSLHRLG  
 LPNKDGVVRFSPYCVCDYMEPERGSEKKTSGPLSPPTGPPGPAPAGPAVRLGSPVYLLFRVLLQCLKQE  
 SDWKVLKLVLGRLPESLRYKVLIFTSPCSVDQLCSALCSMLSGPKTLERL

SGPTRRRLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-XhoI

**Cloning Scheme:**



**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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NP_000539</a>
<b>RefSeq Size:</b>	2250 bp
<b>RefSeq ORF:</b>	5424 bp
<b>Locus ID:</b>	7249
<b>Cytogenetics:</b>	16p13.3
<b>Domains:</b>	Rap_GAP, Tuberin
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Insulin signaling pathway, mTOR signaling pathway, p53 signaling pathway
<b>MW:</b>	82.5 kDa
<b>Gene Summary:</b>	Mutations in this gene lead to tuberous sclerosis complex. Its gene product is believed to be a tumor suppressor and is able to stimulate specific GTPases. The protein associates with hamartin in a cytosolic complex, possibly acting as a chaperone for hamartin. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]