

## Product datasheet for **RC402493**

### 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:	G1579S
Affected Codon#:	1579
Affected NT#:	4735
Nucleotide Mutation:	TSC2 Mutant (G1579S), 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:	5421 bp
Restriction Sites:	SgfI-XhoI
ORF Nucleotide Sequence:	>RC402493 representing NM_000548 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCAAACCAACAAGCAAAGATTCAGGCTTGAAGGAGAAGTTTAAGATTCTGTTGGGACTGGGAACAC  
CGAGGCCAAATCCCAGGTCTGCAGAGGGTAAACAGACGGAGTTTATCATCACCGCGGAAATACTGAGAGA  
ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGGCAGATTTGTGAAGTCGCAAAAACC  
AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTCGCGGATCTGTTGCAGCCGGAGCGGC  
CGCTGGAGGCCCGGCACGCGGTCTGGCTCTGCTGAAGCCATCGTGCAGGGGCAGGGCGAGCGTTTGGG  
GGTCTCAGAGCCCTCTCTTTAAGGTCATCAAGGATTACCCTTCCAACGAAGACCTTCACGAAAGGCTG  
GAGTTTTCAAGGCCCTCACAGACAATGGGAGACACATCACCTACTTGGAGGAAGAGCTGGCTGACTTTG



[View online »](#)

TCCTGCAGTGGATGGATGTTGGCTTGCTCCTCGGAATTCCTTCTGGTGCTGGTGAACCTGGTCAAATTCAA  
 TAGCTGTTACCTCGACGAGTACATCGCAAGGATGGTTCAGATGATCTGTCTGCTGTGCGTCCGGACCGCG  
 TCCTCTGTGGACATAGAGGTCTCCCTGCAGGTGCTGGACGCCGTGGTCTGCTACAACCTGCCTGCCGGCTG  
 AGAGCCTCCCGCTGTTTCATCGTTACCCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG  
 GAAGCTGATGCGGAACCTCCTTGGCACCACCTGGGCCACAGCGCCATCTACAACATGTGCCACCTCATG  
 GAGGACAGACCTACATGGAGGACGCGCCCTGCTGAGAGGAGCCGTGTTTTTGTGGCGATGGCTCTCT  
 GGGGAGCCACCAGGCTATTCTCTCAGGAATCGCCGACATCTGTGTTGCCATATTTTACCAGGCCAT  
 GGCAATGTCGGAACGAGGTGGTGTCTATGAGATCGTCCGTCCATCACCAGGCTCATCAAGAAAGTATAGG  
 AAGGAGCTCCAGGTGGTGGCGTGGGACATTCTGCTGAACATCATCGAACGGCTCCTTTCAGCAGCTCCAGA  
 CCTTGGACAGCCCGGAGCTCAGGACCATCGTCCATGACCTGTTGACCACGGTGGAGGAGCTGTGTGACCA  
 GAACGAGTTCACGGGTCTCAGGAGAGATACTTGAACGGTGGAGAGATGTGCGGACCAGAGGCCTGAG  
 TCCTCCCTCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA  
 ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCCGAGGCGCCGTGCGCATCAAGGTGCTGGA  
 CGTGTCTCCTTGTGCTGCTCATCAACAGGCAGTTCTATGAGGAGGAGCTGATTAACCTAGTGGTTCATC  
 TCGCAGCTCTCCACATCCCGAGGATAAAGACCACCAGTCCGAAAGCTGGCCACCCAGTTGCTGGTGG  
 ACCTGGCAGAGGGCTGCCACACACACCCTTCAACAGCCTGCTGGACATCATCGAAGGTGATGGCCCC  
 CTCCCTCTCCCCACCCCGGAGCTGGAAGAAAGGGATGTGGCCGATACTCGGCCTCCTTGGAGGATGTG  
 AAGACAGCCGTCTGGGGCTTCTGGTCACTTTCAGACCAAGCTGTACACCCTGCCTGCAAGCCACGCCA  
 CGCGTGTGATGAGATGCTGGTCCAGCCACATTCAGTCCACTACAAGCACAGCTACACCCTGCCAATCGC  
 GAGCAGCATCCGGCTGCAGGCCCTTGTACTTCTGTTGCTGCTGCGGGCCGACTCACTGCACCCGCTGGGC  
 CTGCCAACAAAGGATGGAGTGTGCGGTTCCAGCCCTACTGCGTCTGCGACTACATGGAGCCAGAGAGAG  
 GCTCTGAGAAGAAGACCAGCGGCCCTTCTCCTCCACAGGGCCTCCTGGCCCGCGCCTGCAGGCC  
 CGCCGCTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTCCGCGTCTGCTGCAGTGTGAAGCAGGAG  
 TCTGACTGGAAGGTGCTGAAGCTGGTTCGGGAGGCTGCCTGAGTCCCTGCGCTATAAAGTGTCTACT  
 TTACTTCCCCTTGCAGTGTGGACCAGCTGTGCTGCTCTGCTCCATGCTTTTCAGGCCAAAGACACT  
 GGAGCGGCTCCGAGGCGCCCAAGGCTTCTCCAGAAGTACTGACCTGGCCGTGGTTCAGTGTG  
 ACAGCATAAATCTTTACCATAACTACCTGGACAAAACCAAACAGCGGAGATGGTCTACTGCCTGGAGC  
 AGGGCCTCATCCACCGCTGTGCCAGCCAGTGCCTGCTGGCCTTGTCCATCTGCAGCGTGGAGATGCCTGA  
 CATCATCATCAAGGCGCTGCCTGTTCTGGTGGTGAAGCTCACGCACATCTCAGCCACAGCCAGCATGGCC  
 GTCCACTGCTGGAGTTCCTGTCCACTCTGCCAGGCTGCCGACCTCTACAGGAACTTTGCCCGGAGC  
 AGTATGCCAGTGTGTTGCCATCTCCCTGCCGTACACCAACCCCTCAAGTTAATCAGTACATCGTGTG  
 TCTGGCCATCAGCTCATAGCCATGTGGTTCATCAGGTGCCGCTGCCCTTCCGGAAGGATTTTGTCCCT  
 TTCATCTAAGGGCCTGCGGTCCAATGTCTCTTGTCTTTTGTGATGACACCCCGAGAAGGACAGCTTCA  
 GGGCCCGGAGTACTAGTCTAACGAGAGACCAAGAGTCTGAGGATAGCCAGACCCCAAAACAAGGCTT  
 GAATAACTCTCCACCCGTGAAAGAAATCAAGGAGAGCTCTGCAGCCGAGGCCCTCCGGTCCCGCAGCATC  
 AGTGTGTCTGAACATGTGGTCCGAGCAGGATACAGACGTCCCTCACCAGTGCAGCTGGGGTCTGCAG  
 ATGAGAAGTCCGTGGCCAGGCTGACGATAGCCTGAAAAACCTCCACCTGGAGCTCACGGAAACCTGTCT  
 GGACATGATGGCTCGATACGTCTTCTCAACTTACGGCTGTCCGAAAGAGTCTCCTGTGGGCGAGTTC  
 CTCTAGCGGGTGGCAGGACAAAACCTGGCTGGTGGGAACAAGCTTGTACTGTGACGACAAGCGTGG  
 GAACCGGGACCCGGTCTTACTAGGCCCTGGACTCGGGGAGCTGCAGTCCGGCCCGGAGTCCGAGCTCCAG  
 CCCCAGGGTGCATGTGAGACAGACCAAGGAGGCCCGGCAAGCTGGAGTCCAGGCTGGGCAGCAGGTG  
 TCCCGTGGGGCCCGGATCGGGTCCGTTCATGTGCGGGGGCCATGGTCTTCGAGTTGGCGCCCTGGACG  
 TGCCGGCTCCAGTTCTGGGCAGTGCCTTCTCCAGGACCAGGACTGCACCAGCCGCAAACTGA  
 GAAGGCCTCAGCTGCCACCCGGTTCCTGTGACAGGAGAAGACGAACCTGGCGGCCTATGTCCCCCTGCTG  
 ACCCAGGGCTGGGCGGAGATCCTGGTCCGGAGGCCACAGGGAACACCAGCTGGTGTGAGCCTGGAGA  
 ACCCGCTCAGCCCTTCTCCTCGACATCAACAACATGCCCTGCAGGAGCTGTCTAACCCCTCATGGC  
 GGCTGAGCGCTTCAAGGAGCACCAGGACACAGCCCTGTACAAGTCACTGTGGTCCCGGAGCCAGCAGC  
 GCCAAACCCCTCCTCTGCTCCGCTCCAACACAGTGGCTCTTCTCCTCCCTGTACCAGTCCAGCTGCC  
 AAGGACAGCTGCACAGGAGCGTTTCTGGGCAGACTCCGCCGTGGTTCATGGAGGAGGGAAGTCCGGGCGA  
 GGTTCTGTGCTGGTGGAGCCCCAGGGTTGGAGGACGTTGAGGCAGCGCTAGGCATGGACAGGCGCAGC  
 GATGCCTACAGCAGGTGCTCCTCAGTCTCCAGCCAGGAGGAGAAGTGCCTCCACGCGGAGGAGCTGGTTG  
 GCAGGGGCATCCCATCGAGCGAGTGTCTCCTCGAGGGTGGCCGGCCCTCTGTGGACCTCTCCTTCCA

GCCCTCGCAGCCCTGAGCAAGTCCAGCTCCTCTCCCGAGCTGCAGACTCTGCAGGACATCCTCGGGGAC  
CCTGGGGACAAGGCCGACGTGGGCCGGCTGAGCCCTGAGGTTAAGGCCGGTACAGTCAGGGACCCTGG  
ACGGGGAAAGTGTGCTGGTGGCCTCGGGCGAAGACAGTCGGGGCCAGCCGAGGGTCCCTTGCCCTC  
CAGTCCCCCGCTCGCCAGTGGCCTCCGGCCCCGAGGTTACACCATCTCCGACTCGGCCCCATCAGC  
AGGGGCAAGAGAGTAGAGAGGGACGCCCTTAAGAGCAGAGCCACAGCCTCCAATGCAGAGAAAGTGCCAG  
GCATCAACCCAGTTTCGTGTTCTGCAGCTCTACCATTCCCCCTTCTTTGGCGACGAGTCAAACAAGCC  
AATCCTGTGCTGCCAATGAGTCACAGTCCTTTGAGCGGTGGTGCAGCTCCTCGACCAGATCCCATCATA  
GACACCCACAAGATCGCCGTCTGTATGTTGGAGAAGGCCAGAGCAACAGCGAGCTCGCCATCCTGTCCA  
ATGAGCATGGCTCCTACAGGTACACGGAGTTCCTGACGGGCTGAGCCGGCTCATCGAGCTGAAGGACTG  
CCAGCCGGACAAGGTGTACCTGGGAGGCTGGACGTGTGTGGTGAAGGACGGCCAGTTCACCTACTGCTGG  
CACGATGACATCATGCAAGCCGTCTTCCACATCGCCACCCTGATGCCACCAAGGACGTGGACAAGCACC  
GCTGCGACAAGAAGCGCCACCTGGGCAACGACTTTGTGTCCATTGTCTACAATGACTCCGGTGAAGACTT  
CAAGCTTGGCACCATCAAGGGCCAGTTCAACTTTGTCCACGTGATCGTCACCCCGCTGGACTACGAGTGC  
AACCTGGTGTCCCTGCAGTGCAGGAAAGACATGGAGGGCCTTGTGGACACCAGCGTGGCCAAGATCGTGT  
CTGACCGCAACCTGCCCTTCGTGGCCCGCCAGATGGCCCTGCACGAAATATGGCCTCACAGGTGCATCA  
TAGCCGCTCAACCCACCGATATCTACCCCTCAAGTGGATTGCCCGCTCCGCCACATCAAGCGGCTC  
CGCCAGCGGATCTGCGAGGAAGCCGCTACTCCAACCCAGCCTACCTCTGGTGCACCCTCCGTCCATA  
GCAAAGCCCTGCACAGACTCCAGCCGAGCCACACCTGGCTATGAGGTGGGCCAGCGGAAGCGCCTCAT  
CTCCTCGGTGGAGGACTTCACCGAGTTTGTG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

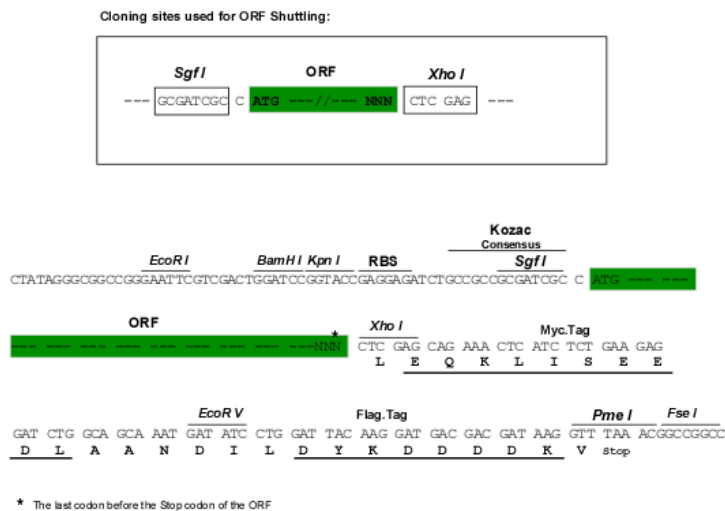
**Protein Sequence:** >RC402493 representing NM\_000548  
 Red=Cloning site Green=Tags(s)

MAKPTSKDSSLKEKFKILLGLGTPRPNPRSAEGKQTEFIITAEILRELSMECGLNRRIRMIGQICEVAKT  
 KKFEEHAVEALWKAVADLLQPERPEARHAVLALLKAIYVQGGERLGLRALFFKVIKDYPSNEDLHERL  
 EVFKALTDNGRHITYLEEELADFVLRQWMDVGLSSEFLLVLVNLVKFNCSYLDEYIARMVQMICLLCVRTA  
 SSVYDIEVSLQVLDVAVVCYNCLPAESLPLFIVTLCRTINVKELCEPCWKLNRNLLGTHLGHSAIYNMCHLM  
 EDRAYMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNEVVSYEIVLSITRLIKKYR  
 KELQVVAWDILLNIIERLLQQLQTLDSPELRTIVHDLTTVEELCDQNEFHGSQERYFELVERCADQRPE  
 SSSLNLSYRAQSIHPAKDGWIQNLQALMERFFRSESRGAVRIKVLVDVLSFVLLINRQFYEEELINSVVI  
 SQLSHIPEDKDHQVRKLATQLLVDLAEGCHTHHFNSLLDIEKVMARSLSPPELEERDVAAYSASLEDV  
 KTAVLGLLVILQTKLYLPASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLRADSLHRLG  
 LPNKDGVVRFSPYCVCDYMEPERGSEKKTSGPLSPPTGPPGAPAGPAVRLGSPYSLLFRVLLQCLKQE  
 SDWKVLKLVLRPELRYKVLIFTSPCSVDQLCSALCSMLSGPKTLERLRGAPEGFRTDLHLAVVPVL  
 TALISYHNYLDKTKQREMYCLEQGLIHRCASQCVALSICSVEMPDIIKALPVLVVKLTHISATASMA  
 VPILLEFLSTLARLPHLYRNFAAEQYASVFAISLPYTNPSKFNQYIVCLAHHVIAMWVIRCLPFRKDFVP  
 FITKGLRSNVLLSFDDETPKDSFRARSTSLNERPKSLRIARPPKQGLNNSPPVKEFKESSAAEAFRCRSI  
 SVSEHVRSRIQTSLSASLGSADENVAQADDSLKNLHLELTETCLDMMARYVFSNFTAVPKRSPVGEF  
 LLAGGRTKTWLVGNKLVTVTTSVGTGTRSLGLDSEGLQSGPESSSSPGVHVRQTKPEAPAKLESQAGQV  
 SRGARDVRVSMGGHGLRVGALDVPASQFLGSATSPGPRTPAAKPEKASAGTRVPVQEKTNLAAYVPLL  
 TQGWAEILVRRPTGNTSWLMSLENLSPFSSDINNMPQLQELSNALMAAERFKEHRDTALYKLSVPAAST  
 AKPPPLPRSNVASFSSLYQSSCQQLHRSVSWADSAVMEEGSPGEVPLVEPPGLEDVEAALGMDRRT  
 DAYSRSSSVSSQEEKSLHAEELVGRGIPIERVVSSEGGSPVDLSFQPSQPLSKSSSSPELQTLQDILGD  
 PGDKADVGRLSPEVKARSQSGTLDGESAAWSASGEDSRGQPEGPLPSSSPRSPSGLRPRGYTISDSAPSR  
 RGKRVKDALKSRATASNAEKVPGINPFSVFLQLYHSPFFGDESNKPIILLPNEQSFERSVQLLDQIPSY  
 DTHKIAVLYVGEQSNSELAILSNEHGSYRYTEFLTGLSRLIELKDCQPKVYLGGLDVCGEDGQFTYCW  
 HDDIMQAVFHIAITLMPKTDVVKHRCDDKRLHGNDFVSIYVNDSEDFKLTIGKQFNFVHVIVTPLDYEC  
 NLVSLQCRKDMGLVDTSVAKIVSDRNLPFVARQMALHANMASQVHHSRNSPTDIYPSKWIARLRHKRL  
 RQRICEEAAYSNPSLPLVHPPSHSKAPAQTPAEPTPGYEVGQRKRLISSVEDFTEFV

SGPTRRRLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-XhoI

**Cloning Scheme:**



<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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>	5421 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>	198.8 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]