

Product datasheet for **RC402407**

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:	R905Q
Affected Codon#:	905
Affected NT#:	2714
Nucleotide Mutation:	TSC2 Mutant (R905Q), 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:	>RC402407 representing NM_000548 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCAAACCAACAAGCAAAGATTCAGGCTTGAAGGAGAAGTTAAGATTCTGTTGGGACTGGGAACAC
CGAGGCCAAATCCCAGGTCTGCAGAGGGTAAACAGACGGAGTTTATCATCACCGCGGAAATACTGAGAGA
ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGGCAGATTTGTGAAGTCGAAAAACC
AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTCGCGGATCTGTTGCAGCCGGAGCGGC
CGCTGGAGGCCCGCACGCGGTCTGGCTCTGCTGAAGCCATCGTGCAGGGGCAGGGCGAGCGTTTGGG
GGTCTCAGAGCCCTCTCTTTAAGGTCATCAAGGATTACCCTTCCAACGAAGACCTTCACGAAAGGCTG
GAGTTTTCAAGGCCCTCACAGACAATGGGAGACACATCACCTACTTGGAGGAAGAGCTGGCTGACTTTG



[View online »](#)

TCCTGCAGTGGATGGATGTTGGCTTGTCTCGGAATTCCTTCTGGTGCTGGTGAACCTGGTCAAATTCAA
 TAGCTGTTACCTCGACGAGTACATCGCAAGGATGGTTCAGATGATCTGTCTGCTGTGCGTCCGGACCGCG
 TCCTCTGTGGACATAGAGGTCTCCCTGCAGGTGCTGGACGCCGTGGTCTGCTACAACCTGCCTGCCGGCTG
 AGAGCCTCCCGCTGTTTCATCGTTACCCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG
 GAAGCTGATGCGGAACCTCCTTGGCACCACCTGGGCCACAGCGCCATCTACAACATGTGCCACCTCATG
 GAGGACAGACCTACATGGAGGACCGCCCTGCTGAGAGGAGCCGTGTTTTTGTGGCGATGGCTCTCT
 GGGGAGCCACCAGGCTATTCTCTCAGGAATCGCCGACATCTGTGTTGCCATATTTTACCAGGCCAT
 GGCAATGTCGAAACGAGGTGGTGTCTATGAGATCGTCCGTCCATCACCAGGCTCATCAAGAAAGTATAGG
 AAGGAGCTCCAGGTGGTGGCGTGGGACATTCTGCTGAACATCATCGAACGGCTCCTTACAGAGCTCCAGA
 CCTTGGACAGCCCGGAGCTCAGGACCATCGTCCATGACCTGTTGACCACGGTGGAGGAGCTGTGTGACCA
 GAACGAGTTCACGGGTCTCAGGAGAGATACTTGAACCTGGTGGAGAGATGTGCGGACCAGAGGCCTGAG
 TCCTCCCTCCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA
 ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCCGAGGCGCCGTGCGCATCAAGGTGCTGGA
 CGTGTCTCCTTTGTGCTGCTCATCAACAGGCAGTTCTATGAGGAGGAGCTGATTAACCTAGTGGTTCATC
 TCGCAGCTCTCCACATCCCGAGGATAAAGACCACCAGTCCGAAAGCTGGCCACCCAGTTGCTGGTGG
 ACCTGGCAGAGGGCTGCCACACACACCCTTCAACAGCCTGCTGGACATCATCGAGAAGGTGATGGCCCC
 CTCCCTCTCCCCACCCCGGAGCTGGAAGAAAGGGATGTGGCCGCATACTCGGCCCTCCTTGGAGGATGTG
 AAGACAGCCGTCTGGGGCTTCTGGTCACTTTCAGACCAAGCTGTACACCCTGCCTGCAAGCCACGCCA
 CGCGTGTGATGAGATGCTGGTCCAGCCACATTCAGTCCACTACAAGCACAGCTACACCCTGCCAATCGC
 GAGCAGCATCCGGCTGCAGGCCCTTGTACTTCTGTTGCTGCTGCGGGCCGACTCACTGCACCCGCTGGGC
 CTGCCAACAAAGGATGGAGTGTGCGGTTCCAGCCCTACTGCGTCTGCGACTACATGGAGCCAGAGAGAG
 GCTCTGAGAAGAAGACCAGCGGCCCTTCTCCTCCACAGGGCCTCCTGGCCCGCGCCTGCAGGCC
 CGCCGCTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTCCGCTCCTGCTGCAGTGTGAAGCAGGAG
 TCTGACTGGAAGGTGCTGAAGCTGGTTCGGGAGGCTGCCTGAGTCCCTGCGCTATAAAGTGTCTACT
 TTACTTCCCCTTGCAGTGTGGACCAGCTGTGCTGCTCTGCTCCATGCTTTTACAGGCCAAAGACACT
 GGAGCGGCTCCGAGGCGCCCAAGGCTTCTCCAGAAGTACTGACCTGGCCGTGGTTCAGTGTG
 ACAGCATTAACTCTTACCATAACTACCTGGACAAAACCAAACAGCGGAGATGGTCTACTGCCTGGAGC
 AGGGCCTCATCCACCGCTGTGCCAGCCAGTGCCTGCTGGCCTTGTCCATCTGCAGCGTGGAGATGCCTGA
 CATCATCATCAAGGCGCTGCCTGTTCTGGTGGTGAAGCTCACGCACATCTCAGCCACAGCCAGCATGGCC
 GTCCACTGCTGGAGTTCCTGTCCACTCTGCCAGGCTGCCGCACCTCTACAGGAACTTTGCCCGGAGC
 AGTATGCCAGTGTGTTGCCATCTCCCTGCCGTACACCAACCCCTCAAGTTTAAATCAGTACATCGTGTG
 TCTGGCCATCAGCTCATAGCCATGTGGTTCATCAGGTGCCGCTGCCCTTCCAGAAGGATTTTGTCCCT
 TTCATCTACTAAGGGCCTGCGGTCCAATGTCTCTTGTCTTTTGTGATGACACCCCGAGAAGGACAGCTTCA
 GGGCCCGGAGTACTAGTCTAACGAGAGACCAAGAGTCTGAGGATAGCCAGACCCCCCAACAAGGCTT
 GAATAACTCTCCACCCGTGAAAGAAATCAAGGAGAGCTCTGCAGCCGAGGCCCTCCGGTGCCTGAGCATC
 AGTGTGTCTGAACATGTGGTCCGAGCAGGATACAGACGTCCCTCACCAGTGCAGCTGGGGTCTGCAG
 ATGAGAAGTCCGTGGCCAGGCTGACGATAGCCTGAAAAACCTCCACCTGGAGCTCACGGAAACCTGTCT
 GGACATGATGGCTCGATACGTCTTCTCAACTTACGGCTGTCCGAAAGAGTCTCCTGTGGGCGAGTTC
 CTCTAGCGGGTGGCAGGACAAAACCTGGCTGGTGGGAACAAGCTTGTACTGTGACGACAAGCGTGG
 GAACCGGGACCCGGTCTTACTAGGCCCTGGACTCGGGGAGCTGCAGTCCGGCCCGGAGTCCGAGCTCCAG
 CCCCAGGGTGCATGTGAGACAGACCAAGGAGGCCCGGCAAGCTGGAGTCCCAGGCTGGGCAGCAGGTG
 TCCCGTGGGGCCCGGATCGGGTCCGTTCATGTGCGGGGGCCATGGTCTTCGAGTTGGCGCCCTGGACG
 TGCCGGCTCCCAGTTCTGGGCAGTGCCTTCTCCAGGACCACGGACTGCACCAGCCGCAAACTGA
 GAAGGCCTCAGCTGCCACCCGGTTCCTGTGACAGGAGAAGACGAACCTGGCGGCCTATGTCCCCCTGCTG
 ACCCAGGGCTGGGCGGAGATCCTGGTCCGGAGGCCACAGGGAACACCAGCTGGTGTGAGCCTGGAGA
 ACCCGCTCAGCCCTTCTCCTCGACATCAACAACATGCCCTGCAGGAGCTGTCTAACCCCTCATGGC
 GGCTGAGCGCTTCAAGGAGCACCGGGACACAGCCCTGTACAAGTCACTGTGGTGCAGCCAGCCAGCAGC
 GCCAAACCCCTCCTCTGCCTCGCTCCAACACAGTGGCTCTTCTCCTCCCTGTACCAGTCCAGCTGCC
 AAGGACAGCTGCACAGGAGCTTCTTCTGGGCGACTCCGCCGTGGTTCATGGAGGAGGGAAGTCCGGGCGA
 GGTTCTGTGCTGGTGGAGCCCCAGGGTTGGAGGACGTTGAGGCAGCGCTAGGCATGGACAGGCGCAGC
 GATGCCTACAGCAGGTGCTCCTCAGTCTCCAGCCAGGAGGAGAAGTGCCTCCACGCGGAGGAGCTGGTTG
 GCAGGGGCATCCCCATCGAGCGAGTGTCTCCTCGAGGGTGGCCGGCCCTGTGGACCTCTCCTTCCA

GCCCTCGCAGCCCCTGAGCAAGTCCAGCTCCTCTCCCGAGCTGCAGACTCTGCAGGACATCCTCGGGGAC
CCTGGGGACAAGGCCGACGTGGGCCGGCTGAGCCCTGAGGTTAAGGCCGGTCACAGTCAGGGACCCTGG
ACGGGGAAAGTGTGCTGGTGGCCTCGGGCGAAGACAGTCGGGGCCAGCCGAGGGTCCCTTGCCCTC
CAGTCCCCCGCTCGCCAGTGGCCTCCGGCCCCGAGGTTACACCATCTCCGACTCGGGCCATCAGC
AGGGGCAAGAGAGTAGAGAGGGACGCCCTTAAGAGCAGAGCCACAGCCTCCAATGCAGAGAAAGTGCCAG
GCATCAACCCAGTTTCGTGTTCTGCAGCTTACCATTCCCCCTTCTTTGGCGACGAGTCAAACAAGCC
AATCCTGTGCTGCCAATGAGTCACAGTCCTTTGAGCGGTGGTGCAGCTCCTCGACCAGATCCCATCATA
GACACCCACAAGATCGCCGTCCTGTATGTTGGAGAAGGCCAGAGCAACAGCGAGCTCGCCATCCTGTCCA
ATGAGCATGGCTCCTACAGGTACACGGAGTTCCTGACGGGCTGGGCCGGCTCATCGAGCTGAAGGACTG
CCAGCCGGACAAGGTGTACCTGGGAGGCCTGGACGTGTGTGGTGAAGGACGGCCAGTTCACCTACTGCTGG
CACGATGACATCATGCAAGCCGTCTTCCACATCGCCACCCTGATGCCACCAAGGACGTGGACAAGCACC
GCTGCGACAAGAAGCGCCACCTGGGCAACGACTTTGTGTCCATTGTCTACAATGACTCCGGTGAAGACTT
CAAGCTTGGCACCATCAAGGGCCAGTTCAACTTTGTCCACGTGATCGTCACCCCGCTGGACTACGAGTGC
AACCTGGTGTCCCTGCAGTGCAGGAAAGACATGGAGGGCCTTGTGGACACCAGCGTGGCCAAGATCGTGT
CTGACCGCAACCTGCCCTTCGTGGCCCGCCAGATGGCCCTGCACGAAATATGGCCTCACAGGTGCATCA
TAGCCGCTCCAACCCACCGATATCTACCCCTCCAAGTGGATTGCCCGGCTCCGCCACATCAAGCGGCTC
CGCCAGCGGATCTGCGAGGAAGCCGCTACTCCAACCCAGCCTACCTCTGGTGCACCCTCCGTCCATA
GCAAAGCCCTGCACAGACTCCAGCCGAGCCACACCTGGCTATGAGGTGGGCCAGCGGAAGCGCCTCAT
CTCCTCGGTGGAGGACTTCACCGAGTTTGTG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

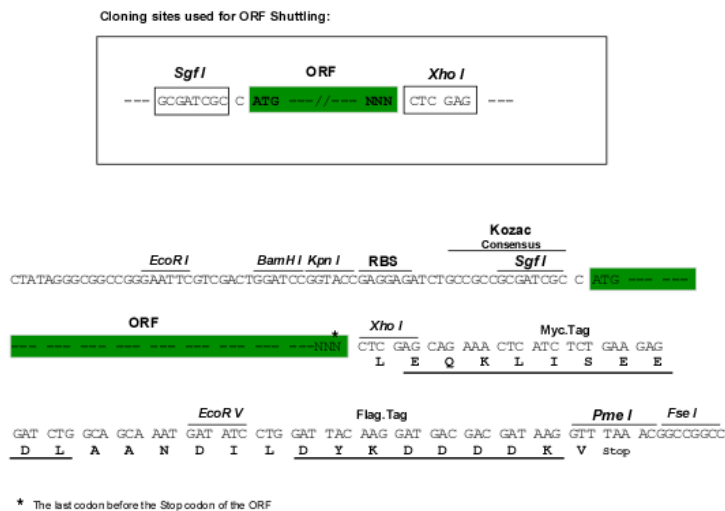
Protein Sequence: >RC402407 representing NM_000548
 Red=Cloning site Green=Tags(s)

MAKPTSKDSGLKEKFKILLGLGTPRPNRPSAEGKQTEFIITAEILRELSMECGLNRRIRMIGQICEVAKT
 KKFEEHAVEALWKAVADLLQPERPEARHAVLALLKAIYVQGGERLGLRALFFKVIKDYPSNEDLHERL
 EVFKALTDNGRHITYLEEELADFVLRQWMDVGLSSEFLLVLVNLVKFNCSYLDEYIARMVQMICLLCVRTA
 SSVYDIEVSLQVLDVAVVCYNCLPAESLPLFIVTLCRTINVKELCEPCWKLMRNLLGTHLGHSAIYNMCHLM
 EDRAVMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNEVVSYEIVLSITRLIKKYR
 KELQVVAWDILLNIIERLLQQLQTLDSPELRTIVHDLTTVEELCDQNEFHGSQERYFELVERCADQRPE
 SSSLNLSYRAQSIHPAKDGWIQNLQALMERFFRSESRGAVRIKVLVDVLSFVLLINRQFYEEELINSVVI
 SQLSHIPEDKDHQVRKLATQLLVDLAEGCHTHHFNSLLDIEKVMARSLSPPELEERDVAAYSASLEDV
 KTAVLGLLVILQTKLYLPASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLRADSLHRLG
 LPNKDGVVRFSPYCVCDYMEPERGSEKKTSGPLSPPTGPPGAPAGPAVRLGSPYSLLFRVLLQCLKQE
 SDWKVLKLVLRPELRYKVLIFTSPCSVDQLCSALCSMLSGPKTLERLRGAPEGFRTDLHLAVVPL
 TALISYHNYLDKTKQREMYCLEQGLIHRCASQCVALSICSVEMPDIIKALPVLVVKLTHISATASMA
 VPLLEFLSTLARLPHLYRNFAAEQYASVFAISLPYTNPSKFNQYIVCLAHHVIAMWVIRCLPFQKDFVP
 FITKGLRSNVLLSFDDETPKDSFRARSTSLNERPKSLRIARPPKQGLNNSPPVKEFKESSAAEAFRCRSI
 SVSEHVRSRIQTSLSASLGSADENVAQADDSLKNLHLELTETCLDMMARYVFSNFTAVPKRSPVGEF
 LLAGGRKTWLVGNKLVTVTTSVGTGTRSLGLDSEGLQSGPESSSPGVHVRQTKEAPAKLESQAGQQV
 SRGARDVRVSMGGHGLRVGALDVPASQFLGSATSPGPRTPAAKPEKASAGTRVPVQEKTNLAAYVPLL
 TQGWAEILVRRPTGNTSWLMSLENLSPFSSDINMPLQELSNALMAAERFKEHRDTALYKLSVPAAST
 AKPPPLPRSNVASFSSLYQSSCQQLHRSVSWADSAVMEEGSPGEVPLVEPPGLEDVEAALGMDRRT
 DAYSRSSSVSSQEEKSLHAEELVGRGIPIERVVSSEGGSPVDLSFQPSQPLSKSSSSPELQTLQDILGD
 PGDKADVGRLSPEVKARSQSGTLDGESAAWSASGEDSRGQPEGPLPSSSPRSPSGLRPRGYTISDSAPSR
 RGKRVKRDALKSRATASNAEKVPGINPFSVFLQLYHSPFFGDESNKPIILLPNEQSFERSVQLLDQIPSY
 DTHKIAVLYVGEQSNSELAILSNEHGSYRYTEFLTGLGRLIELKDCQPKVYLGGLDVCGEDGQFTYCW
 HDDIMQAVFHIAITLMPKTDVVKHRCDDKRLHGNDFVSIYVNDSEDFKLTIGKQFNFVHVIVTPLDYEC
 NLVSLQCRKDMGLVDTSVAKIVSDRNLPFVARQMALHANMASQVHHSRNPDIYPSKWIARLRHKRL
 RQRICEEAAYSNPSLPLVHPPSHSKAPAQTPAEPTPGYEVGQRKRLISSVEDFTEFV

SGPTRRRL**LEQKLI**SEEDLAANDILDYKDDDDKV

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.
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).
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NP_000539
RefSeq Size:	5421 bp
RefSeq ORF:	5424 bp
Locus ID:	7249
Cytogenetics:	16p13.3
Domains:	Rap_GAP, Tuberin
Protein Families:	Druggable Genome
Protein Pathways:	Insulin signaling pathway, mTOR signaling pathway, p53 signaling pathway
MW:	198.8 kDa
Gene Summary:	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]