

Product datasheet for **RC402371**

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:	R622P
Affected Codon#:	622
Affected NT#:	1865
Nucleotide Mutation:	TSC2 Mutant (R622P), 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:	>RC402371 representing NM_000548 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCAAACCAACAAGCAAAGATTCAGGCTTGAAGGAGAAGTTTAAGATTCTGTTGGGACTGGGAACAC
CGAGGCCAAATCCCAGGTCTGCAGAGGGTAAACAGACGGAGTTTATCATCACCGCGGAAATACTGAGAGA
ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGGCAGATTTGTGAAGTCGCAAAAACC
AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTCGCGGATCTGTTGCAGCCGGAGCGGC
CGCTGGAGGCCCGGCACGCGGTCTGGCTCTGCTGAAGCCATCGTGCAGGGGCAGGGCGAGCGTTTGGG
GGTCTCAGAGCCCTCTCTTTAAGGTCAAGGATTACCCTTCCAACGAAGACCTTCACGAAAGGCTG
GAGTTTTCAAGGCCCTCACAGACAATGGGAGACACATCACCTACTTGGAGGAAGAGCTGGCTGACTTTG



[View online »](#)

TCCTGCAGTGGATGGATGTTGGCTTGCTCCTCGGAATTCCTTCTGGTGCTGGTGAACCTGGTCAAATTCAA
 TAGCTGTTACCTCGACGAGTACATCGCAAGGATGGTTCAGATGATCTGTCTGCTGTGCGTCCGGACCGCG
 TCCTCTGTGGACATAGAGGTCTCCCTGCAGGTGCTGGACGCCGTGGTCTGCTACAACCTGCCTGCCGGCTG
 AGAGCCTCCCGCTGTTTCATCGTTACCCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG
 GAAGCTGATGCGGAACCTCCTTGGCACCACCTGGGCCACAGCGCCATCTACAACATGTGCCACCTCATG
 GAGGACAGACCTACATGGAGGACGCGCCCTGCTGAGAGGAGCCGTGTTTTTGTGGCGATGGCTCTCT
 GGGGAGCCACCAGGCTATTCTCTCAGGAATCGCCGACATCTGTGTTGCCATATTTTACCAGGCCAT
 GGCAATGTCGGAACGAGGTGGTGTCTATGAGATCGTCCGTCCATCACCAGGCTCATCAAGAAAGTATAGG
 AAGGAGCTCCAGGTGGTGGCGTGGGACATTCTGCTGAACATCATCGAACGGCTCCTTACAGAGCTCCAGA
 CCTTGGACAGCCCGGAGCTCAGGACCATCGTCCATGACCTGTTGACCACGGTGGAGGAGCTGTGTGACCA
 GAACGAGTTCACGGGTCTCAGGAGAGATACTTGAACGGTGGAGAGATGTGCGGACCAGAGGCCTGAG
 TCCTCCCTCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA
 ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCCGAGGCGCCGTGCGCATCAAGGTGCTGGA
 CGTGTCTCCTTTGTGCTGCTCATCAACAGGCAGTTCTATGAGGAGGAGCTGATTAACCTAGTGGTCATC
 TCGCAGCTCTCCACATCCCGAGGATAAAGACCACCAGTCCGAAAGCTGGCCACCCAGTTGCTGGTGG
 ACCTGGCAGAGGGCTGCCACACACACCCTTCAACAGCCTGCTGGACATCATCGAGAAGGTGATGGCCCC
 CTCCCTCTCCCCACCCCGGAGCTGGAAGAAAGGGATGTGGCCGCATACTCGGCCCTCCTTGGAGGATGTG
 AAGACAGCCGTCTGGGGCTTCTGGTCACTTTCAGACCAAGCTGTACACCCTGCCTGCAAGCCACGCCA
 CGCGTGTGATGAGATGCTGGTCCAGCCACATTCAGTCCACTACAAGCACAGCTACACCCTGCCAATCGC
 GAGCAGCATCCGGCTGCAGGCCCTTGTACTTCTGTTGCTGCTGCCGGCCGACTCACTGCACCCGCTGGGC
 CTGCCAAACAAGGATGGAGTGTGCGGTTCCAGCCCTACTGCGTCTGCGACTACATGGAGCCAGAGAGAG
 GCTCTGAGAAGAAGACCAGCGGCCCTTCTCCTCCACAGGGCCTCCTGGCCCGCGCCTGCAGGCC
 CGCCGCTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTCCGCGTCTGCTGCAGTGTGAAGCAGGAG
 TCTGACTGGAAGGTGCTGAAGCTGGTTCGGGAGGCTGCCTGAGTCCCTGCGCTATAAAGTGTCTACT
 TTACTTCCCTTGCAGTGTGGACCAGCTGTGCTGCTCTGCTCCATGCTTTTACAGGCCAAAGACACT
 GGAGCGGCTCCGAGGCGCCCAAGGCTTCTCCAGAAGTACTGACCTGGCCGTGGTTCAGTGTG
 ACAGCATAATCTCTTACCATAACTACCTGGACAAAACCAACAGCGGAGATGGTCTACTGCCTGGAGC
 AGGGCCTCATCCACCGCTGTGCCAGCCAGTGCCTGCTGGCCTTGTCCATCTGCAGCGTGGAGATGCCTGA
 CATCATCATCAAGGCGCTGCCTGTTCTGGTGGTGAAGCTCACGCACATCTCAGCCACAGCCAGCATGGCC
 GTCCACTGCTGGAGTTCCTGTCCACTCTGCCAGGCTGCCGCACCTCTACAGGAACTTGGCCGGGAGC
 AGTATGCCAGTGTGTTGCCATCTCCCTGCCGTACACCAACCCCTCAAGTTAATCAGTACATCGTGTG
 TCTGGCCATCAGCTCATAGCCATGTGGTTCATCAGGTGCCGCTGCCCTTCCGGAAGGATTTTGTCCCT
 TTCATCTAAGGGCCTGCGGTCCAATGTCTCTTGTCTTTTGTGATGACACCCCGAGAAGGACAGCTTCA
 GGGCCCGGAGTACTAGTCTAACGAGAGACCAAGAGTCTGAGGATAGCCAGACCCCAACAAGGCTT
 GAATAACTCTCCACCCGTGAAAGAAATCAAGGAGAGCTCTGCAGCCGAGGCCCTCCGGTGGCCGAGCATC
 AGTGTGTCTGAACATGTGGTCCGAGCAGGATACAGACGTCCCTCACCAGTGCCAGCTTGGGGTCTGCAG
 ATGAGAAGTCCGTGGCCAGGCTGACGATAGCCTGAAAAACCTCCACCTGGAGCTCACGGAAACCTGTCT
 GGACATGATGGCTCGATACGTCTTCTCAACTTACGGCTGTCCGGAAGAGTCTCCTGTGGGCGAGTTC
 CTCTAGCGGGTGGCAGGACAAAACCTGGCTGGTGGGAACAAGCTTGTACTGTGACGACAAGCGTGG
 GAACCGGGACCCGGTCTTACTAGGCCCTGGACTCGGGGAGCTGCAGTCCGGCCCGGAGTCCAGCTCCAG
 CCCCAGGGTGCATGTGAGACAGACCAAGGAGGCCCGGCAAGCTGGAGTCCCAGGCTGGGCAGCAGGTG
 TCCCGTGGGGCCCGGATCGGGTCCGTTCCATGTCCGGGGGCCATGGTCTTCGAGTTGGCGCCCTGGACG
 TGCCGGCTCCCAGTTCTGGGCAGTGCCTTCTCCAGGACCACGGACTGCACCAGCCGCAAACTGGA
 GAAGGCCTCAGCTGGCACCCGGTTCCTGTGACAGGAGAAGACGAACCTGGCGGCCTATGTCCCCCTGCTG
 ACCCAGGGCTGGGCGGAGATCCTGGTCCGGAGGCCACAGGGAACACCAGCTGGTGTGAGCCTGGAGA
 ACCCGCTCAGCCCTTCTCCTCGGACATCAACAACATGCCCTGCAGGAGCTGTCTAACGCCCTCATGGC
 GGCTGAGCGCTTCAAGGAGCACCGGGACACAGCCCTGTACAAGTCACTGTGGTCCGGCAGCCAGCAGC
 GCCAAACCCCTCCTCTGCCTCGCTCCAACACAGTGGCTCTTCTCCTCCTGTACCAGTCCAGCTGCC
 AAGGACAGCTGCACAGGAGCGTTTCTGGGCAGACTCCGCCGTGGTTCATGGAGGAGGGAAGTCCGGGCGA
 GGTTCTGTGCTGGTGGAGCCCCAGGGTTGGAGGACGTTGAGGCAGCGCTAGGCATGGACAGGCGCAGC
 GATGCCTACAGCAGGTGCTCCTCAGTCTCCAGCCAGGAGGAGAAGTGCCTCCACGCGGAGGAGCTGGTTG
 GCAGGGGCATCCCATCGAGCGAGTGTCTCCTCGAGGGTGGCCGGCCCTGTGGACCTCTCCTTCCA

GCCCTCGCAGCCCTGAGCAAGTCCAGCTCCTCTCCCGAGCTGCAGACTCTGCAGGACATCCTCGGGGAC
CCTGGGGACAAGGCCGACGTGGGCCGGCTGAGCCCTGAGGTTAAGGCCGGTCACAGTCAGGGACCCTGG
ACGGGGAAAGTGTGCTGGTGGCCTCGGGCGAAGACAGTCGGGGCCAGCCGAGGGTCCCTTGCCCTC
CAGCTCCCCCGCTCGCCAGTGGCCTCCGGCCCCGAGGTTACACCATCTCCGACTCGGGCCATCACGC
AGGGGCAAGAGAGTAGAGAGGGACGCCTTAAAGAGCAGAGCCACAGCCTCCAATGCAGAGAAAGTGCCAG
GCATCAACCCAGTTTCGTGTTCTGCAGCTCTACCATTCCCCCTTCTTTGGCGACGAGTCAAACAAGCC
AATCCTGTGCTGCCAATGAGTCACAGTCCTTTGAGCGGTGGTGCAGCTCCTCGACCAGATCCCATCATA
GACACCCACAAGATCGCCGTCCTGTATGTTGGAGAAGGCCAGAGCAACAGCGAGCTCGCCATCCTGTCCA
ATGAGCATGGCTCCTACAGGTACACGGAGTTCCTGACGGGCTGGGCCGGCTCATCGAGCTGAAGGACTG
CCAGCCGGACAAGGTGTACCTGGGAGGCCTGGACGTGTGTGGTGAAGGACGGCCAGTTCACCTACTGCTGG
CACGATGACATCATGCAAGCCGTCTTCCACATCGCCACCCTGATGCCACCAAGGACGTGGACAAGCACC
GCTGCGACAAGAAGCGCCACCTGGGCAACGACTTTGTGTCCATTGTCTACAATGACTCCGGTGAGGACTT
CAAGCTTGGCACCATCAAGGGCCAGTTCAACTTTGTCCACGTGATCGTCACCCCGCTGGACTACGAGTGC
AACCTGGTGTCCCTGCAGTGCAGGAAAGACATGGAGGGCCTTGTGGACACCAGCGTGGCCAAGATCGTGT
CTGACCGCAACCTGCCCTTCGTGGCCCGCCAGATGGCCCTGCACGAAATATGGCCTCACAGGTGCATCA
TAGCCGCTCCAACCCACCGATATCTACCCCTCCAAGTGGATTGCCCGGCTCCGCCACATCAAGCGGCTC
CGCCAGCGGATCTGCGAGGAAGCCGCTACTCCAACCCAGCCTACCTCTGGTGCACCCTCCGTCCATA
GCAAAGCCCTGCACAGACTCCAGCCGAGCCACACCTGGCTATGAGGTGGGCCAGCGGAAGCGCCTCAT
CTCCTCGGTGGAGGACTTCACCGAGTTTGTG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence: >RC402371 representing NM_000548
 Red=Cloning site Green=Tags(s)

MAKPTSKDSSLKEKFKILLGLGTPRPNRPSAEGKQTEFIITAEILRELSMECGLNRRIRMIGQICEVAKT
 KKFEEHAVEALWKAVADLLQPERPLEARHAVLALLKAIYVQGGERLGLRALFFKVIKDYPSNEDLHERL
 EVFKALTDNGRHITYLEEELADFVLRQWMDVGLSSEFLLVLVNLVKFNCSYLDEYIARMVQMICLLCVRTA
 SSVYDIEVSLQVLDVAVVCYNCLPAESLPLFIVTLCRTINVKELCEPCWKLMRNLLGTHLGHSAIYNMCHLM
 EDRAYMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNEVVSYEIVLSITRLIKKYR
 KELQVVAWDILLNIIERLLQQLQTLDSPELRTIVHDLLTTVEELCDQNEFHGSQERYFELVERCADQRPE
 SSSLNLSYRAQSIHPAKDGWIQNLQALMERFFRSESRGAVRIKVLVDVLSFVLLINRQFYEEELINSVVI
 SQLSHIPEDKDHQVRKLATQLLVDLAEGCHTHHFNSLLDIEKVMARSLSPPELEERDVAAYSASLEDV
 KTAVLGLLVILQTKLYLPASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLPADSLHRLG
 LPNKDGVVRFSPYCVCDYMEPERGSEKKTSGPLSPPTGPPGAPAGPAVRLGSPYSLLFRVLLQCLKQE
 SDWKVLKLVLRPELRYKVLIFTSPCSVDQLCSALCSMLSGPKTLERLRGAPEGFRTDLHLAVVPVL
 TALISYHNYLTKQREMYCLEQGLIHRCASQCVALSICSVEMPDIIKALPVLVVKLTHISATASMA
 VPLLEFLSTLARLPHLYRNFAAEQYASVFAISLPYTNPSKFNQYIVCLAHHVIAMWFIRCLPFRKDFVP
 FITKGLRSNVLLSFDTPPEKDSFRARSTSLNERPKSLRIARPPKQGLNNSPPVKEFKESSAAEAFRCRSI
 SVSEHVRSRIQTSLSASLGSADENVAQADDSLKNLHLELTETCLDMMARYVFSNFTAVPKRSPVGEF
 LLAGGRTKTWLVGNKLVTVTTSVGTGTRSLGLDSEGLQSGPESSSPGVHVRQTKEAPAKLESQAGQQV
 SRGARDVRVSMGGHGLRVGALDVPASQFLGSATSPGPRTPAAKPEKASAGTRVPVQEKTNLAAYVPLL
 TQGWAEILVRRPTGNTSWLMSLENLSPFSSDINNMPQLQELSNALMAAERFKEHRDTALYKLSVPAAST
 AKPPPLPRSNTVASFSSLYQSSCQQLHRSVSWADSAVMEEGSPGEVPLVEPPGLEDVEAALGMDRRT
 DAYSRSSSVSSQEEKSLHAEELVGRGIPIERVVSSEGGSPVDLSFQPSQPLSKSSSSPELQTLQDILGD
 PGDKADVGRLSPEVKARSQSGTLDGESAAWSASGEDSRGQPEGPLPSSSPRSPSGLRPRGYTISDSAPSR
 RGKRVKRDALKSRATASNAEKVPGINPFSVFLQLYHSPFFGDESNKPIILLPNEQSFERSVQLLDQIPSY
 DTHKIAVLYVGEQSNSELAILSNEHGSYRYTEFLTGLGRLIELKDCQPKVYLGGLDVCGEDGQFTYCW
 HDDIMQAVFHIAITLMPKTDVVKHRCDDKRLHGNDFVSIYVNDSEDFKLTIGKQFNFVHVIVTPLDYEC
 NLVSLQCRKDMGLVDTSVAKIVSDRNLPFVARQMALHANMASQVHHSRNPDIYPSKWIARLRHKRL
 RQRICEEAAYSNPSLPLVHPPSHSKAPAQTPAEPTPGYEVGQRKRLISSVEDFTEFV

SGPTRRRL**LEQLISEEDLAANDILDYKDDDDK**V

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]