

Product datasheet for **RC402338**

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:	L345R
Affected Codon#:	345
Affected NT#:	1034
Nucleotide Mutation:	TSC2 Mutant (L345R), 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:	>RC402338 representing NM_000548 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGC**C

ATGGCCAAACCAACAAGCAAAGATTGAGGCTTGAAGGAGAAGTTTAAGATTCTGTTGGGACTGGGAACAC
 CGAGGCCAAATCCCAGGTCTGCAGAGGGTAAACAGACGGAGTTTATCATCACCGCGGAAATACTGAGAGA
 ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGCGAGATTTGTGAAGTCGCAAAAACC
 AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTCGCGGATCTGTTGCAGCCGAGCGGC
 CGCTGGAGGCCCGGCACGCGGTGCTGGCTCTGCTGAAGGCCATCGTGCAGGGGCAGGGCGAGCGTTTGGG
 GGTCTCAGAGCCCTCTCTTTAAGGTCATCAAGGATTACCCTTCCAACGAAGACCTTCACGAAAGGCTG
 GAGGTTTTCAAGGCCCTCACAGACAATGGGAGACACATCACCTACTTGGAGGAAGAGCTGGCTGACTTTG


[View online »](#)

TCCTGCAGTGGATGGATGTTGGCTTGCTCCTCGGAATTCCTTCTGGTGGTGAACCTGGTCAAATTCAA
TAGCTGTTACCTCGACGAGTACATCGCAAGGATGGTTCAGATGATCTGTCTGCTGTCGCTCCGGACCGCG
TCCTCTGTGGACATAGAGGTCTCCCTGCAGGTGCTGGACGCCGTGGTCTGCTACAACCTGCCTGCCGGCTG
AGAGCCTCCCGCTGTTTCATCGTTACCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG
GAAGCTGATGCGGAACCTCCTTGGCACCACCTGGGCCACAGCGCCATCTACAACATGTGCCACCTCATG
GAGGACAGAGCCTACATGGAGGACGCGCCCTGCTGAGAGGAGCCGTGTTTTTGTGGGCATGGCTCTCT
GGGGAGCCCAACCGCTCTATTCTCTCAGGAACCTGCGGACATCTGTGTTGCCATCATTTTACCAGGCCAT
GGCATGTCCGAACGAGGTGGTGTCTATGAGATCGTCTGTCCATCACCAGGCGCATCAAGAAGTATAGG
AAGGAGCTCCAGGTGGTGGCGTGGGACATTCTGCTGAACATCATCGAACGGCTCCTTCAGCAGCTCCAGA
CCTTGGACAGCCCGGAGCTCAGGACCATCGTCCATGACCTGTTGACCACGGTGGAGGAGCTGTGTGACCA
GAACGAGTTCACGGGTCTCAGGAGAGATACTTGAACCTGGTGGAGAGATGTGCGGACCAGAGGCCTGAG
TCCTCCCTCCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA
ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCGAGGCGCCGTGCGCATCAAGGTGCTGGA
CGTGCTGTCTTTGTGCTGCTCATCAACAGGCAGTTCTATGAGGAGGAGCTGATTAACCTAGTGGTCATC
TCGAGCTCTCCACATCCCGAGGATAAAGACCACAGGTCCGAAAGCTGGCCACCCAGTTGCTGGTGG
ACCTGGCAGAGGGCTGCCACACACACCACTTCAACAGCCTGCTGGACATCATCGAGAAGGTGATGGCCCG
CTCCCTCTCCCCACCCCGGAGCTGGAAGAAAGGGATGTGGCCGCATACTCGGCCCTCCTTGGAGGATGTG
AAGACAGCCGTCTGGGGCTTCTGGTCACTCTTCAGACCAAGCTGTACACCTGCCTGCAAGCCACGCCA
CGCGTGTGATAGAGATGCTGGTCAGCCACATTAGCTCCACTACAAGCACAGCTACACCTGCCAATCGC
GAGCAGCATCCGGCTGCAGGCCCTTGAATTCCTGTTGCTGCTGCGGGCCGACTCACTGCACCCGCTGGGC
CTGCCCCAACAAGGATGGAGTCGTGCGGTTGAGCCCTACTGCGTCTGCGACTACATGGAGCCAGAGAGAG
GCTCTGAGAAGAAGACCAGCGGCCCTTCTCCTCCACAGGGCCTCCTGGCCCGCGCCTGCAGGCC
CGCCGTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTTCCGCTGCTGCTGCACTGTGAAGCAGGAG
TCTGACTGGAAGGTGCTGAAGCTGGTTCTGGGACGGCTGCCTGAGTCCCTGCGCTATAAAGTGCTCATCT
TTACTTCCCCTTGCACTGTGGACCAGCTGTGCTGCTCTGCTCCATGCTTTTTCAGGCCAAAGACACT
GGAGCGGCTCCGAGGCGCCCCAGAAGGCTTCTCCAGAAGTGAACCTGACCTGGCCGTGGTTCCAGTGCTG
ACAGCATTAATCTCTTACCATAACTACCTGGACAAAACCAACAGCGGAGATGGTCTACTGCCTGGAGC
AGGGCCTCATCCACCGCTGTGCCAGCCAGTGCCTGCTGGCCTTGTCCATCTGCAGCGTGGAGATGCCTGA
CATCATCATCAAGGCGCTGCCTGTTCTGGTGGTGAAGCTCACGCACATCTCAGCCACAGCCAGCATGGCC
GTCCCACTGCTGGAGTTCCTGTCCACTCTGCCAGGCTGCCGACCTCTACAGGAACCTTTCGCGCGGAGC
AGTATGCCAGTGTGTTGCCATCTCCCTGCCGTACACCAACCCCTCCAAGTTTAATCAGTACATCGTGTG
TCTGGCCCATCAGCTCATAGCCATGTGGTTTCATCAGGTGCCGCTGCCCTTCCGGAAGGATTTTGTCCCT
TTCATCACTAAGGGCCTGCGGTCCAATGTCTCTTGTCTTTTGTGATGACACCCCGAGAAGGACAGCTTCA
GGGCCCCGAGTACTAGTCTCAACGAGAGACCAAGAGTCTGAGGATAGCCAGACCCCCCAACAAGGCTT
GAATAACTCTCCACCCGTGAAAGAATTCAGGAGAGCTCTGCAGCCGAGGCCCTTCCGGTGCCGCAGCATC
AGTGTGTCTGAACATGTGGTCCGAGCAGGATACAGACGTCCCTCACCAGTGCCAGCTTGGGGTCTGCAG
ATGAGAAGTCCGTGGCCAGGCTGACGATAGCCTGAAAAACCTCCACCTGGAGCTCACGGAAACCTGTCT
GGACATGATGGCTCGATACGTCTTCTCCAATTACAGGCTGTCCCGAAGAGGTCTCCTGTGGGCGAGTTC
CTCTAGCGGGTGGCAGGACAAAACCTGGCTGGTTGGGAACAAGCTTGTCACTGTGACGACAAGCGTGG
GAACCGGACCCGGTCTTACTAGGCCCTGGACTCGGGGGAGCTGCACTCCGGCCCGGAGTCGAGCTCCAG
CCCCGGGTGCTGTGAGACAGACCAAGGAGGCGCCGCGCAAGCTGGAGTCCAGGCTGGGCAGCAGGTG
TCCCGTGGGGCCCGGATCGGGTCCGTTCCATGTGCGGGGGCCATGGTCTTCGAGTTGGCGCCCTGGACG
TGCCGGCTCCAGTTCTGGGAGTGCCACTTCTCCAGGACCAGGACTGCACCAGCCGCGAAACCTGA
GAAGGCCTCAGCTGGCACCCTGGTTCTGTGACAGGAGAAGACGAACCTGGCGGCCTATGTGCCCTGCTG
ACCCAGGGCTGGGCGGAGATCCTGGTCCGAGGCCCCACAGGGAACACCAGCTGGCTGATGAGCCTGGAGA
ACCCGCTCAGCCCTTCTCCTCGGACATCAACAACATGCCCTGCAGGAGCTGTCTAACGCCCTCATGGC
GGCTGAGCGCTTCAAGGAGCACCAGGACACAGCCCTGTACAAGTCACTGTGGTGGCGGAGCCAGCAGC
GCCAAACCCCTCCTCTGCCTCGCTCCAACACAGTGGCTCTTTCTCCTCCTGTACAGTCCAGCTGCC
AAGGACAGCTGCACAGGAGCGTTTCTGGGCGAGCTCCGCCGTGGTCACTGGAGGAGGGAAGTCCGGGCGA
GGTTCTGTGCTGGTGGAGCCCCAGGGTTGGAGGACGTTGAGGACAGCGTAGGCATGGACAGGCGCAGC
GATGCCTACAGCAGGTGCTCCTCAGTCTCCAGCCAGGAGGAGAAGTGCCTCCACGCGGAGGAGCTGGTTG
GCAGGGGCATCCCCATCAGCGAGTGTCTCCTCGAGGGTGGCCGGCCCTCTGTGGACCTCTCCTTCCA

GCCCTCGCAGCCCCTGAGCAAGTCCAGCTCCTCTCCCGAGCTGCAGACTCTGCAGGACATCCTCGGGGAC
 CCTGGGGACAAGGCCGACGTGGGCCGGCTGAGCCCTGAGGTTAAGGCCCGGTACAGTCAGGGACCCTGG
 ACGGGGAAAGTGTGCTGGTGGCCTCGGGCGAAGACAGTCGGGGCCAGCCGAGGGTCCCTTGCCCTC
 CAGCTCCCCCGCTCGCCAGTGGCCTCCGGCCCCGAGGTTACACCATCTCCGACTCGGGCCCATCACGC
 AGGGGCAAGAGAGTAGAGAGGGACGCCCTTAAGAGCAGAGCCACAGCCTCCAATGCAGAGAAAGTGCCAG
 GCATCAACCCAGTTTCGTGTTCTGCAGCTCTACCATTCCCCCTTCTTTGGCGACGAGTCAAACAAGCC
 AATCCTGCTGCCAATGAGTCACAGTCCTTTGAGCGGTCGGTGCAGCTCCTCGACCAGATCCCATCATAC
 GACACCCACAAGATCGCCGTCTGTATGTTGGAGAAGGCCAGAGCAACAGCGAGCTCGCCATCCTGTCCA
 ATGAGCATGGCTCCTACAGGTACACGGAGTTCTTGACGGGCTGGGCCGGCTCATCGAGCTGAAGGACTG
 CCAGCCGGACAAGGTGTACCTGGGAGGCCTGGACGTGTGTGGTGAAGACGGCCAGTTCACCTACTGCTGG
 CACGATGACATCATGAAGCCGTCTTCCACATCGCCACCCTGATGCCACCAAGGACGTGGACAAGCACC
 GCTGCGACAAGAAGCGCCACCTGGGCAACGACTTTGTGTCCATTGTCTACAATGACTCCGGTGAAGACTT
 CAAGCTTGGCACCATCAAGGGCCAGTTCAACTTTGTCCACGTGATCGTACCCCGCTGGACTACGAGTGC
 AACCTGGTGTCCCTGCAGTGCAGGAAAGACATGGAGGGCCTTGTGGACACCAGCGTGGCCAAGATCGTGT
 CTGACCGCAACCTGCCCTTCGTGGCCCGCCAGATGGCCCTGCACGCAAAATATGGCCTCACAGGTGCATCA
 TAGCCGCTCCAACCCACCGATATCTACCCCTCCAAGTGGATTGCCCGGCTCCGCCACATCAAGCGGCTC
 CGCCAGCGGATCTGCGAGGAAGCCGCCTACTCCAACCCAGCCTACCTCTGGTGCACCCTCCGTCCCAT
 GCAAAGCCCCTGCACAGACTCCAGCCGAGCCACACCTGGCTATGAGGTGGGCCAGCGGAAGCGCCTCAT
 CTCCTCGGTGGAGGACTTCACCGAGTTTGTG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

>RC402338 representing NM_000548

Red=Cloning site Green=Tags(s)

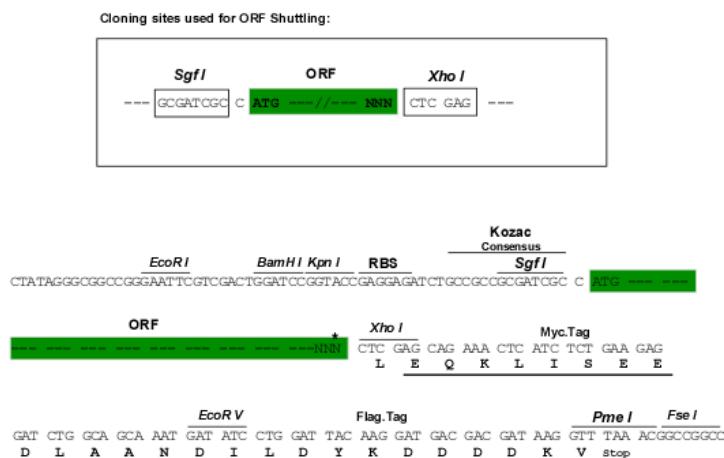
MAKPTSKDSGLKEKFKILLGLGTPRPNPSAEGKQTEFIITAEILRELSMECGLNNRIRMIGQICEVAKT
KKFEEHAVEALWKAVADLLQPERPLEARHAVLALLKAIVQGQGERLGVLRALFFKVIKDYPSEDNLHERL
EVFKALTDNGRHITYLEELADFLVQWMDVGLSSEFLLVLVNLVKFNSCYLDEYIARMVQMICLLCVRTA
SSVDIEVSLQVLDAVVCYNCLPAESLPLFIVTLCRTINVKELCEPCWKLMRNLGLTHLGHSAIYNMCHLM
EDRAYMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNEVVSYEIVLSITRRIKKYR
KELQVVAWDILLNIIERLLQQLQTLDSPELRTIVHDLLTTVEELCDQNEFHGSQERYFELVERCADQRPE
SSLLNLSISYRAQSIHPAKDGIWQNLQALMERFFRSESRGAVRIKVLDVLSFVLLINRQFYEEELINSVVI
SQLSHIPEDKDHQVRKLATQLLDLAEGCHTHFNSLLDIIEKVMARSLPPPELEERDVAAYSASLEDV
KTAVLGLLVILQTKLYTLPAASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLRADSLHRLG
LPNKDGVVRFSPYCVCDYMEPERGESEKTSGLSPPTGPPGAPAGPAVLGSVPYSLLFRVLLCLQCKQE
SDWKVLKLVGLRPLESRYKVLIFTSPCSVDQLCSALCSKSGPKTLERLGAEPQSRTDLHLAVVPVL
TALISYHNYLDKTKQREMYCYCLEQGLIHRCASQCVVALSTCSVEMPDIIITKALPVLVVKLTHISATASMA
VPLLEFLSTLARLPHLYRNFAAEQYASVFAISLPYTNPSKFNQYIVCLAHHVIAWFIIRCRLPFRKDFVP
FITKGLRSNVLLSFDTPKDSFRARSTSLNERPKSLRIARPPKQGLNNSPPVKEFKESSAAEAFRCRSI
SVSEHVRSRIQTSLSASLSADENVAQADDLSKNLHLELTETCLDMMARYVFSNFTAVPKRSPVGEF
LLAGGRKTWLGNKLVTVTTSVGTGRSLLGLDSGELQSGPESSSSPGVHVQRTEAPAKLESQAGQOV
SRGARDVRMSGGHGLRVGALDVPASQFLGSATSPGPRTAPAAKPEKASAGTRVPVQEKTNLAAYVPLL
TQGWAEILVRRPTGNTSWLMSLENPLSPFSSDINNMPLQELSNALMAAERKEHRDTALYKLSVPAAST
AKPPPLPRSNTVASFSSLYQSSCQQLHRSSVSWADSAVYMEEGSPGEVPVLVEPPLEDVEAALGMDRR
DAYSRSSSVSSQEEKSLHAEELVGRGPIERVVSSEGGRPVSLSFQPSQPLSKSSSSPELQTLQDILGD
PGDKADVGRLSPEVKARSQSGTLDGESAAWSASGEDSRGQPEGLPSSSPRSPSGRLRPGYITISDSAPSR
RGKRVERDALKSRATASNAEKVPGINPSFVFLQLYHSPFFGDESINKPILLPNESQSFSERSQVLLDQIPSY
DTHKIAVLVYGEGQNSELAAILSNEHSGSYRYTEFLTGLGRILIELKDCQPKVYLLGGLDVCGEDGQFTYCW
HDDIMQAVFHIAITLMPTKDVKDKRKHGNDVFVSIYVNDSGEDFKLGTIKGFNFVHVIVTPLDYEC
NLYSLQCRKDMEGLVDTSVAKIVSDRNLPLFVARQMALHANMASQVHHSRNPNTDIYPSKWIARLRHKT
RORICEEAAAYSNPSPLVHPPSHSKAPAOPTPAEPTPGYEVGORKRLISSVEDFTEFV

SGPTRRRL**E**QKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-XhoI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

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]