

Product datasheet for RC402314

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:	A196T
Affected Codon#:	196
Affected NT#:	586
Nucleotide Mutation:	TSC2 Mutant (A196T), 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:	>RC402314 representing NM_000548 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGC**

ATGGCCAAACCAACAAGCAAAGATTGAGGCTTGAAGGAGAAGTTTAAGATTCTGTTGGGACTGGGAACAC
 CGAGGCCAAATCCCAGGTCTGCAGAGGGTAAACAGACGGAGTTTATCATCACCGCGAAATACTGAGAGA
 ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGCGAGATTTGTGAAGTCGCAAAACC
 AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTCGCGGATCTGTTGCAGCCGAGCGGC
 CGCTGGAGGCCCGGCACGCGGTGCTGGCTCTGCTGAAGGCCATCGTGCAGGGGCAGGCGAGCGTTTGGG
 GGTCTCAGAGCCCTCTCTTTAAGGTCATCAAGGATTACCCTTCCAACGAAGACCTTCACGAAAGGCTG
 GAGGTTTTCAAGGCCCTCACAGACAATGGGAGACACATCACCTACTTGGAGGAAGAGCTGGCTGACTTTG


[View online »](#)

TCCTGCAGTGGATGGATGTTGGCTTGCTCCTCGGAATTCCTTCTGGTGGTGAACCTGGTCAAATTCAA
TAGCTGTTACCTCGACGAGTACATCACAAAGGATGGTTCAGATGATCTGTCTGCTGCGTCCGGACCGCG
TCCTCTGTGGACATAGAGGTCTCCCTGCAGGTGCTGGACGCCGTGGTCTGCTACAACCTGCCTGCCGGCTG
AGAGCCTCCCGCTGTTTCATCGTTACCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG
GAAGCTGATGCGGAACCTCCTTGGCACCACCTGGGCCACAGCGCCATCTACAACATGTGCCACCTCATG
GAGGACAGAGCCTACATGGAGGACGCGCCCTGCTGAGAGGAGCCGTGTTTTTGTGGGCATGGCTCTCT
GGGAGGCCACCGGCTCTATTCTCTCAGGAACCTGCGGACATCTGTGTTGCCATCATTTTACCAGGCCAT
GGCATGTCCGAACGAGGTGGTGTCTATGAGATCGTCTGTCCATCACCAGGCTCATCAAGAAGTATAGG
AAGGAGCTCCAGGTGGTGGCGTGGGACATTCTGCTGAACATCATCGAACGGCTCCTTACGAGCTCCAGA
CCTTGGACAGCCCGGAGCTCAGGACCATCGTCCATGACCTGTTGACCACGGTGGAGGAGCTGTGTGACCA
GAACGAGTTCACGGGTCTCAGGAGAGATACTTGAACCTGGTGGAGAGATGTGCGGACCAGAGGCCTGAG
TCCTCCCTCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA
ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCGAGGCGCCGTGCGCATCAAGGTGCTGGA
CGTGCTGTCTTTGTGCTGCTCATCAACAGGCAGTTCTATGAGGAGGAGCTGATTAACCTAGTGGTCATC
TCGAGCTCTCCACATCCCGAGGATAAAGACCACAGGTCCGAAAGCTGGCCACCCAGTTGCTGGTGG
ACCTGGCAGAGGGCTGCCACACACACCACTTCAACAGCCTGCTGGACATCATCGAGAAGGTGATGGCCCG
CTCCCTCTCCCCACCCCGGAGCTGGAAGAAAGGGATGTGGCCGCATACTCGGCCCTCCTTGGAGGATGTG
AAGACAGCCGTCTGGGGCTTCTGGTCACTCTTACAGCAAGCTGTACACCTGCCTGCAAGCCACGCCA
CGCGTGTGATAGAGTGTGTCAGCCACATTCAGTCCACTACAAGCACAGCTACACCTGCCAATCGC
GAGCAGCATCCGGCTGCAGGCCCTTGTACTTCTGTTGCTGCTGCGGGCCGACTCACTGCACCGCTGGGC
CTGCCCCAAGGATGGAGTGTGCGGTTGAGCCCTACTGCGTCTGCGACTACATGGAGCCAGAGAGAG
GCTCTGAGAAGAAGACCAGCGGCCCTTCTCTCTCCACAGGGCCTCCTGGCCCGCGCCTGCAGGCC
CGCCGTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTTCCGCGTCTGCTGCACTGTGAAGCAGGAG
TCTGACTGGAAGGTGCTGAAGCTGGTTCTGGGACGGCTGCCTGAGTCCCTGCGCTATAAAGTGCTCATCT
TTACTTCCCCTTGCAGTGTGGACCAGCTGTGCTGCTCTGCTCTGCTCCATGCTTTACAGGCCAAAGACACT
GGAGCGGCTCCGAGGCGCCCAAGGCTTCTCCAGAAGTGTGACCTGGCCGTGGTTCCAGTGCTG
ACAGCATTAATCTCTTACCATAACTACCTGGACAAAACCAACAGCGGAGATGGTCTACTGCCTGGAGC
AGGGCCTCATCCACCGCTGTGCCAGCCAGTGCCTGCTGGCCTTGTCCATCTGCAGCGTGGAGATGCCTGA
CATCATCATCAAGGCGCTGCCTGTTCTGGTGGTGAAGCTCACGCACATCTCAGCCACAGCCAGCATGGCC
GTCCCACTGCTGGAGTTCCTGTCCACTCTGCCAGGCTGCCGACCTCTACAGGAACCTTGGCCGGGAGC
AGTATGCCAGTGTGTTGCCATCTCCCTGCCGTACACCAACCCCTCCAAGTTAATCAGTACATCGTGTG
TCTGGCCCATCAGTCATAGCCATGTGGTTTCATCAGGTGCCGCTGCCCTTCCGGAAGGATTTTGTCCCT
TTCATCACTAAGGGCCTGCGGTCCAATGTCTCTTGTCTTTGATGACACCCCGAGAAGGACAGCTTCA
GGGCCCCGAGTACTAGTCTAACGAGAGACCAAGAGTCTGAGGATAGCCAGACCCCCCAACAAGGCTT
GAATAACTCTCCACCCGTGAAAGAATTCAGGAGAGCTCTGCAGCCGAGGCCCTCCGGTGCCGCAGCATC
AGTGTGTCTGAACATGTGGTCCGAGCAGGATACAGACGTCCCTCACCAGTGCCAGCTTGGGGTCTGCAG
ATGAGAAGTCCGTGGCCAGGCTGACGATAGCCTGAAAAACCTCCACCTGGAGCTCACGGAAACCTGTCT
GGACATGATGGCTCGATACGTCTTCTCCAATTACAGGCTGTCCCGAAGAGGTCTCCTGTGGGCGAGTTC
CTCTAGCGGGTGGCAGGACAAAACCTGGCTGGTTGGGAACAAGCTTGTCACTGTGACGACAAGCGTGG
GAACCGGACCCGGTCTTACTAGGCCCTGGACTCGGGGGAGCTGCAAGTCCGGCCCGGAGTCGAGCTCCAG
CCCCGGGTGTCATGTGAGACAGACCAAGGAGGCGCCGCAAGCTGGAGTCCAGGCTGGGCAGCAGGTG
TCCCGTGGGGCCCGGATCGGGTCCGTTCCATGTGCGGGGGCCATGGTCTTCGAGTTGGCGCCCTGGACG
TGCCGGCTCCAGTTCTGGGAGTGCCACTTCTCCAGGACCAGGACTGCACCAGCCGCGAAACCTGA
GAAGGCCTCAGCTGGCACCCTGGTTCTGTGACGAGAGAAGACGAACCTGGCGGCCTATGTGCCCTGCTG
ACCCAGGGCTGGGCGGAGATCCTGGTCCGAGGCCCCACAGGGAACACCAGCTGGCTGATGAGCCTGGAGA
ACCCGCTCAGCCCTTCTCTCGGACATCAACAACATGCCCTGCAGGAGCTGTCTAACGCCCTCATGGC
GGCTGAGCGCTTCAAGGAGCACCAGGACACAGCCCTGTACAAGTCACTGTGGTGGCGGAGCCAGCAGC
GCCAAACCCCTCCTCTGCCTCGCTCCAACACAGTGGCTCTTTCTCCTCCTGTACCAGTCCAGCTGCC
AAGGACAGCTGCACAGGAGCGTTTCTGGGCGAGCTCCGCCGTGGTCACTGGAGGAGGGAAGTCCGGGCGA
GGTTCTGTGCTGGTGGAGCCCCAGGGTTGGAGGACGTTGAGGACAGCGTAGGCATGGACAGGCGCAGC
GATGCCTACAGCAGGTGCTCCTCAGTCTCCAGCCAGGAGGAGAAGTGCCTCCACGCGGAGGAGCTGGTTG
GCAGGGGCATCCCATCGAGCGAGTCGTCTCCTCGAGGGTGGCCGGCCCTCTGTGGACCTCTCCTTCCA

GCCCTCGCAGCCCCTGAGCAAGTCCAGCTCCTCTCCCGAGCTGCAGACTCTGCAGGACATCCTCGGGGAC
 CCTGGGGACAAGGCCGACGTGGGCCGGCTGAGCCCTGAGGTTAAGGCCCGGTACAGTCAGGGACCCTGG
 ACGGGGAAAGTGTGCTGGTGGCCTCGGGCGAAGACAGTCGGGGCCAGCCGAGGGTCCCTTGCCCTC
 CAGCTCCCCCGCTCGCCAGTGGCCTCCGGCCCCGAGGTTACACCATCTCCGACTCGGCCCCATCACGC
 AGGGGCAAGAGAGTAGAGAGGGACGCCCTTAAGAGCAGAGCCACAGCCTCCAATGCAGAGAAAGTGCCAG
 GCATCAACCCAGTTTCGTGTTCTGCAGCTCTACCATTCCCCCTTCTTTGGCGACGAGTCAAACAAGCC
 AATCCTGTGCTGCCAATGAGTCACAGTCCTTTGAGCGGTGGTGCAGCTCCTCGACCAGATCCCATCATAC
 GACACCCACAAGATCGCCGTCTGTATGTTGGAGAAGGCCAGAGCAACAGCGAGCTCGCCATCCTGTCCA
 ATGAGCATGGCTCCTACAGGTACACGGAGTTCTTGACGGGCTGGGCCGGCTCATCGAGCTGAAGGACTG
 CCAGCCGGACAAGGTGTACCTGGGAGGCCTGGACGTGTGTGGTGAAGACGGCCAGTTCACCTACTGCTGG
 CACGATGACATCATGAAGCCGTCTTCACATCGCCACCCTGATGCCACCAAGGACGTGGACAAGCACC
 GCTGCGACAAGAAGCGCCACCTGGGCAACGACTTTGTGTCCATTGTCTACAATGACTCCGGTGAAGACTT
 CAAGCTTGGCACCATCAAGGGCCAGTTCAACTTTGTCCACGTGATCGTACCCCGCTGGACTACGAGTGC
 AACCTGGTGTCCCTGCAGTGCAGGAAAGACATGGAGGGCCTTGTGGACACCAGCGTGGCCAAGATCGTGT
 CTGACCGCAACCTGCCCTTCGTGGCCCGCCAGATGGCCCTGCACGCAAAATATGGCCTCACAGGTGCATCA
 TAGCCGCTCCAACCCACCGATATCTACCCCTCCAAGTGGATTGCCCGGTCCGCCACATCAAGCGGCTC
 CGCCAGCGGATCTGCGAGGAAGCCGCCTACTCCAACCCAGCCTACCTCTGGTGCACCCTCCGTCCCAT
 GCAAAGCCCCTGCACAGACTCCAGCCGAGCCACACCTGGCTATGAGGTGGGCCAGCGGAAGCGCCTCAT
 CTCCTCGGTGGAGGACTTCACCGAGTTTGTG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

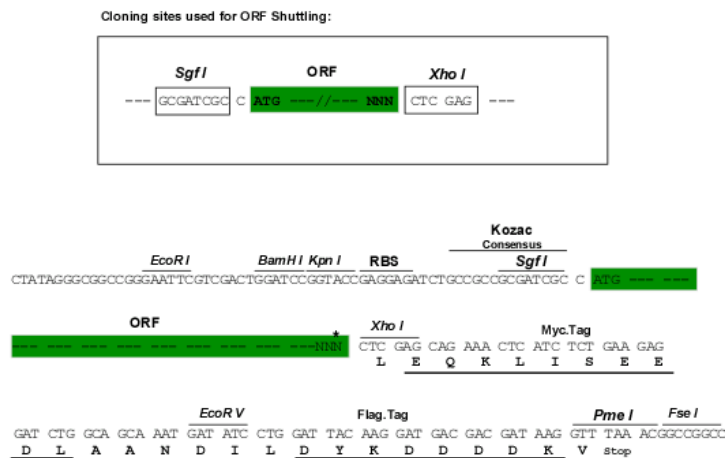
Protein Sequence: >RC402314 representing NM_000548
Red=Cloning site Green=Tags(s)

MAKPTSKDGLKEKFKILLGLGTPRPNPRSAEGKQTEFIITAEILRELSMECGLNNRIRMIGQICEVAKT
KKFEEHAVEALWKAVADLLQPERPEARHAVLALLKAIYVQGGGERLGLRALFFKVIKDYPNSNEDLHERL
EVFKALTDNGRHITYLEEELADFVLQWMDVGLSSEFLLVLVNLVKFNSCYLDEYITRMVQMICLLCVRTA
SSVDIEVSLQVLDAVVCYNCLPAESLPLFIVTLCRTINVKELCEPCWKLNRNLLGTHLGHSAIYNMCHLM
EDRAYMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNEVVSYEIVLSITRLIKKYR
KELQVVAWDILLNIIERLLQQLQTLDSPELRTIVHDLLTTVEELCDQNEFHGSQERYFELVERCADQRPE
SSLLNLISYRAQSIHPAKDGWIQNLQALMERFFRSESARGAVRIKVLVDVLSFVLLINRQFYEEELINSVVI
SQLSHIPEDKDHQVRKLATQLLVDLAEGCHTHHFNSLLDIEKVMARSLSPPELEERDVAAYSASLEDV
KTAVLGLLVILQTKLYLPASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLRADSLHRLG
LPNKDGVVRFSPYCVCDYMEPERGSEKKTSGPLSPPTGPPGAPAGPAVRLGSPVPSLLFRVLLQCLKQE
SDWKVLKLVGLRPESLRYKVLIFTSPCSVDQLCSALCSMLSGPKTLERLRGAPEGFSRTDLHLAVVPVL
TALISYHNYLDKTKQREMYVYCLEQGLIHRCASQCVVALSICSVEMPDIIKALPVLVVKLTHISATASMA
VPLLEFLSTLARLPHLYRNFAAEQYASVFAISLPYTNP SKFNQYIVCLAHHVIAWMFIRCRLPFRKDFVP
FITKGLRSNVLLSFDDTPEKDSFRARSTSLNERPKSLRIARPPKQGLNNSPPVKEFKESSAAEAFRCRSI
SVSEHVRSRIQTSLSASLGSADENSAQADDLSLKNLHLELTETCLDMARYVFSNFTAVPKRSPVGEF
LLAGGRKTWLVGKLVTVTTSVGTGTRSLGLDSGELQSGPESSSPGVHVRQTKEAPAKLESQAGQV
SRGARDVRVMSGHGLRVGALDVPASQFLGSATSPPGRTAPAAKPEKASAGTRVPVQEKTNLAAYVPLL
TQGWAEILVRRPTGNTSWLMSLENPLSPFSSDINNMPQLQELSNALMAAERFKEHRDTALYKSLVPAAST
AKPPPLPRSNTVASFSSLYQSSCQQLHRSVSWADSAVMEEGSPGEVPVLVEPPGLEDVEALGMDRRT
DAYSRSSSVSSQEEKSLHAEELVGRGPIERVVSSEGGSPVDSLFPSPQLSKSSSSPELQTLQDILGD
PGDKADVGRLSPEVKARSQSGTLDGESAAWSAGDSRGQPEGPLPSSSPRSPGLRPRGYTISDSAPSR
RGKRVERDALKSRATASNAEKVPGINPSFVFLQLYHSPFFGDESNKPILLPNESQSFFERSVQLLDQIPSY
DTHKIAVLYVGEQGSNELAILSNEHGSYRYTEFLTGLGRLIELKDCQDPKVYLGGLDVCGEDGQFTYCW
HDDIMQAVFHIAITLMPKTDVDKHKRCDKRLHGNDFVSIYVNDGEGDFKLGTIKGQFNFVHVIVTPLDYEC
NLVSLQCRKDMGLVDTSVAKIVSDRNLPFVARQMALHANMASQVHHSRNPDIYPSKWIARLRHIKRL
RQRICEEAAYSNPSLPLVHPPSHSKAPAQTPAEP TPGYEVGQRKRLISSVEDFTEFV

SGPTRRRL**EQKLISEEDLA**NDILDYKDDDDKV

Restriction Sites: SgfI-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]