

Product datasheet for RC402517

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:	Q1686X
Affected Codon#:	1686
Affected NT#:	5056
Nucleotide Mutation:	TSC2 Mutant (Q1686X), 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:	5055 bp
Restriction Sites:	SgfI-XhoI
ORF Nucleotide Sequence:	>RC402517 representing NM_000548 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCAAACCAACAAGCAAAGATTCAGGCTTGAAGGAGAAGTTTAAGATTCTGTTGGGACTGGGAACAC
CGAGGCCAAATCCCAGGTCTGCAGAGGGTAAACAGACGGAGTTTATCATCACCGCGGAAATACTGAGAGA
ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGGCAGATTTGTGAAGTCGCAAAAACC
AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTCGCGGATCTGTTGCAGCCGGAGCGGC
CGCTGGAGGCCCGGCACGCGGTCTGGCTCTGCTGAAGCCATCGTGCAGGGGCAGGGCGAGCGTTTGGG
GGTCTCAGAGCCCTCTCTTTAAGGTCAAGGATTACCCTTCCAACGAAGACCTTCACGAAAGGCTG
GAGTTTTCAAGGCCCTCACAGACAATGGGAGACACATCACCTACTTGGAGGAAGAGCTGGCTGACTTTG



[View online »](#)

TCCTGCAGTGGATGGATGTTGGCTTGTCTCGGAATTCCTTCTGGTGCTGGTGAACCTGGTCAAATTCAA
 TAGCTGTTACCTCGACGAGTACATCGCAAGGATGGTTCAGATGATCTGTCTGCTGTGCGTCCGGACCGCG
 TCCTCTGTGGACATAGAGGTCTCCCTGCAGGTGCTGGACGCCGTGGTCTGCTACAACCTGCCTGCCGGCTG
 AGAGCCTCCCGCTGTTTCATCGTTACCCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG
 GAAGCTGATGCGGAACCTCCTTGGCACCCACCTGGGCCACAGCGCCATCTACAACATGTGCCACCTCATG
 GAGGACAGACCTACATGGAGGACGCGCCCTGCTGAGAGGAGCCGTGTTTTTGGGCGATGGCTCTCT
 GGGGAGCCACCGGCTATTCTCTCAGGAATCGCCGACATCTGTGTTGCCATATTTTACCAGGCCAT
 GGCAATGTCGGAACGAGGTGGTGTCTATGAGATCGTCCGTCCATCACCAGGCTCATCAAGAAAGTATAGG
 AAGGAGCTCCAGGTGGTGGCGTGGGACATTCTGCTGAACATCATCGAACGGCTCCTTACAGAGCTCCAGA
 CCTTGGACAGCCCGGAGCTCAGGACCATCGTCCATGACCTGTTGACCACGGTGGAGGAGCTGTGTGACCA
 GAACGAGTTCACGGGTCTCAGGAGAGATACTTGAACGGTGGAGAGATGTGCGGACCAGAGGCCTGAG
 TCCTCCCTCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA
 ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCCGAGGCGCCGTGCGCATCAAGGTGCTGGA
 CGTGCTGTCTTTGTGCTGCTCATCAACAGGCAGTTCTATGAGGAGGAGCTGATTAACCTAGTGGTTCATC
 TCGCAGCTCTCCACATCCCGAGGATAAAGACCACCAGTCCGAAAGCTGGCCACCCAGTTGCTGGTGG
 ACCTGGCAGAGGGCTGCCACACACACCCTTCAACAGCCTGCTGGACATCATCGAGAAGGTGATGGCCCC
 CTCCCTCTCCCCACCCCGGAGCTGGAAGAAAGGGATGTGGCCGCATACTCGGCCCTCCTTGGAGGATGTG
 AAGACAGCCGTCTGGGGCTTCTGGTCACTTTCAGACCAAGCTGTACACCCTGCCTGCAAGCCACGCCA
 CGCGTGTGATGAGATGCTGGTCCAGCCACATTCAGTCCACTACAAGCACAGCTACACCCTGCCAATCGC
 GAGCAGCATCCGGCTGCAGGCCCTTGTACTTCTGTTGCTGCTGCGGGCCGACTCACTGCACCCGCTGGGC
 CTGCCAACAAAGGATGGAGTCTGCGGTTCCAGCCCTACTGCGTCTGCGACTACATGGAGCCAGAGAGAG
 GCTCTGAGAAGAAGACCAGCGGCCCTTCTCCTCCACAGGGCCTCCTGGCCCGGCGCTGACAGGCC
 CGCCGCTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTCCGCGTCTGCTGCAGTGTGAAGCAGGAG
 TCTGACTGGAAGGTGCTGAAGCTGGTTCTGGGCAGGCTGCCTGAGTCCCTGCGCTATAAAGTGCTCATCT
 TTACTTCCCCTTGCAGTGTGGACCAGCTGTGCTGCTCTGCTCCATGCTTTTACAGGCCAAAGACACT
 GGAGCGGCTCCGAGGCGCCCAAGGCTTCTCCAGAAGTACTGACCTGGCCGTGGTTCAGTGTG
 ACAGCATTAACTCTTACCATAACTACCTGGACAAAACCAAACAGCGGAGATGGTCTACTGCCTGGAGC
 AGGGCCTCATCCACCGCTGTGCCAGCCAGTGCCTGCTGGCCTTGTCCATCTGCAGCGTGGAGATGCCTGA
 CATCATCATCAAGGCGCTGCCTGTTCTGGTGGTGAAGCTCACGCACATCTCAGCCACAGCCAGCATGGCC
 GTCCACTGCTGGAGTTCCTGTCCACTCTGCCAGGCTGCCGCACCTCTACAGGAACTTGGCCGGGAGC
 AGTATGCCAGTGTGTTGCCATCTCCCTGCCGTACACCAACCCCTCAAGTTTAAATCAGTACATCGTGTG
 TCTGGCCATCAGCTCATAGCCATGTGGTTCATCAGGTGCCGCTGCCCTTCCGGAAGGATTTTGTCCCT
 TTCATCTACTAAGGGCCTGCGGTCCAATGTCTCTTGTCTTTTGTGATGACACCCCGAGAAGGACAGCTTCA
 GGGCCCGGAGTACTAGTCTCAACGAGAGACCAAGAGTCTGAGGATAGCCAGACCCCCCAACAAGGCTT
 GAATAACTCTCCACCCGTGAAAGAAATCAAGGAGAGCTCTGCAGCCGAGGCCCTCCGGTGGCCGAGCATC
 AGTGTGTCTGAACATGTGGTCCGAGCAGGATACAGACGTCCCTCACCAGTGCCAGCTTGGGGTCTGCAG
 ATGAGAAGTCCGTGGCCAGGCTGACGATAGCCTGAAAAACCTCCACCTGGAGCTCACGGAAACCTGTCT
 GGACATGATGGCTCGATACGTCTTCTCAACTTACGGCTGTCCGGAAGAGTCTCCTGTGGGCGAGTTC
 CTCTAGCGGGTGGCAGGACAAAACCTGGCTGGTTGGGAACAAGCTTGTACTGTGACGACAAGCGTGG
 GAACCGGGACCCGGTCTTACTAGGCCCTGGACTCGGGGGAGCTGCAGTCCGGCCCGGAGTCCGAGCTCCAG
 CCCCAGGGTGCATGTGAGACAGACCAAGGAGGCCCGGCAAGCTGGAGTCCAGGCTGGGCAGCAGGTG
 TCCCGTGGGGCCCGGATCGGGTCCGTTCCATGTGCGGGGGCCATGGTCTTGCAGTTGGCGCCCTGGACG
 TGCCGGCTCCAGTTCTGGGCAGTGCCTTCTCCAGGACCACGGACTGCACCAGCCGCAAACTGGA
 GAAGGCCTCAGCTGGCACCCGGTCTCTGTGACAGGAGAAGACGAACCTGGCGGCCTATGTCCCCCTGCTG
 ACCCAGGGCTGGGCGGAGATCCTGGTCCGGAGGCCACAGGGAACACCAGCTGGTGTGAGCCTGGAGA
 ACCCGCTCAGCCCTTCTCCTCGGACATCAACAACATGCCCTGCAGGAGCTGTCTAACGCCCTCATGGC
 GGCTGAGCGCTTCAAGGAGCACCGGGACACAGCCCTGTACAAGTCACTGTGGTCCGGCAGCCAGCAGC
 GCCAAACCCCTCCTCTGCCTCGCTCCAACACAGTGGCTCTTTCTCCTCCTGTACCAGTCCAGCTGCC
 AAGGACAGCTGCACAGGAGCGTTTCTGGGCAGACTCCGCCGTGGTTCATGGAGGAGGGAAGTCCGGGCGA
 GGTTCTGTGCTGGTGGAGCCCCAGGGTTGGAGGACGTTGAGGCAGCGCTAGGCATGGACAGGCGCAGC
 GATGCCTACAGCAGGTGCTCCTCAGTCTCCAGCCAGGAGGAGAAGTGCCTCCACGCGGAGGAGCTGGTTG
 GCAGGGGCATCCCCATCGAGCGAGTCTCTCCTCGAGGGTGGCCGGCCCTGTGGACCTCTCCTTCCA

GCCCTCGCAGCCCTGAGCAAGTCCAGCTCCTCTCCCGAGCTGCAGACTCTGCAGGACATCCTCGGGGAC
 CCTGGGGACAAGGCCGACGTGGGCCGGCTGAGCCCTGAGGTTAAGGCCGGTACAGTCAGGGACCTGG
 ACGGGGAAAGTGTGCTGGTGGCCTCGGGCGAAGACAGTCGGGGCCAGCCGAGGGTCCCTTGCCCTC
 CAGTCCCCCGCTCGCCAGTGGCCTCCGGCCCCGAGGTTACACCATCTCCGACTCGGGCCCATCACGC
 AGGGGCAAGAGAGTAGAGAGGGACGCCCTTAAGAGCAGAGCCACAGCCTCCAATGCAGAGAAAGTGCCAG
 GCATCAACCCAGTTTCGTGTTCTGCAGCTTACCATTCCCCCTTCTTTGGCGACGAGTCAAACAAGCC
 AATCCTGCTGCCAATGAGTCACAGCTTTGAGCGGTCGGTGCAGCTCCTCGACCAGATCCCATCATAC
 GACACCCACAAGATCGCCGTCTGTATGTTGGAGAAGGCCAGAGCAACAGCGAGCTCGCCATCCTGTCCA
 ATGAGCATGGCTCCTACAGGTACACGGAGTTCCTGACGGGCTGGGCCGGCTCATCGAGCTGAAGGACTG
 CCAGCCGGACAAGGTGTACTGGGAGGCTGGACGTGTGTGGTGAAGGACGGCCAGTTCACCTACTGCTGG
 CACGATGACATCATGCAAGCCGTCTCCACATCGCCACCCTGATGCCACCAAGGACGTGGACAAGCACC
 GCTGCGACAAGAAGCGCCACCTGGGCAACGACTTTGTGTCATTGTCTACAATGACTCCGGTGAGGACTT
 CAAGCTTGGCACCATCAAGGGCCAGTTCAACTTTGTCCACGTGATCGTACCCCGCTGGACTACGAGTGC
 AACCTGGTGTCCCTG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

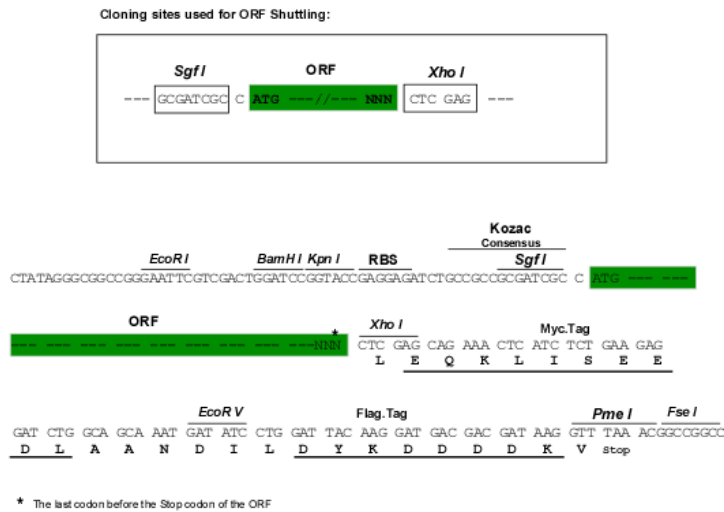
>RC402517 representing NM_000548
 Red=Cloning site Green=Tags(s)

MAKPTSKDSSLKEKFKILLGLGTPRPNRPAEKGQTEFIITAEILRELSMECGLNRRMIRMIQICEVAKT
 KKFEHAEVALWKAVADLLQPERPLEARHVALALLKAIYVQGGERLGVLRALFFKVIKDYPSNEDLHERL
 EVFKALTDNGRHITYLEELADFVLQWMDVGLSSEFLLVNLVKFNSCYLDEYIARMVQMICLLCVRTA
 SSVDIIEVSLQVLDAVVYCNLPAESLPLFIVTLCRTINVKELCEPCWKLNRNLLGTHLGHSAIYNMCHLM
 EDRAYMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNVSVYIEVLSITRLIKKYR
 KELQVVAWDILLNIIERLLQQLQTLDSPELRTIVHDLLTTVEELCDQNEFHGSQERYFELVERCADQRPE
 SLLNLSYRAQSIHPAKDGWIQNLQALMERFRSESRGAVRIKVLVDLVSFVLLINRQFYEEELINSVVI
 SQLSHIPEDKDHQVRKATQLLDLAEGCHTHHFNSLLDIEKVMARSLSPPELEERDVAAYSASLEDV
 KTAVLGLLVILQTKLYTLPAASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLRADSLHRLG
 LPNKDGVVRFSPYCVCDYMEPERGSEKTSGLSPPTGPPGAPAVRLGSVPYSLLFRVLLQCLKQE
 SDWKVLLVLRGRLPESLRYKVLIFTSPCSVDQLCSALCSMLSGPKTLERLRGAPEGFSRTDLHLAVVPVL
 TALISYHNYLDKTKQREMVCLEQQLIHRCASQCVALSICSVEMPDIIKALPVLVVKLTHISATASMA
 VPLLEFLSTLARLPHLYRNFAAEQYASVFAISLPYTNPSKFNQYIVCLAHHVIAWWFIRCRLPFRKDFVP
 FITKGLRSNVLVSFDDTPEKDSFRARSTSLNERPKSLRIARPPKQGLNNSPPVKEFKESSAAEFRCRSI
 SVSEHVRSRIQTSLTSASLGSADENVAQADDLKNLHLELTETCLDMMARYVFSNFTAVPKRSPVGEF
 LLAGGRKTWLVGNKLVTTVSVGTGTRSLGLDLSGELQSGPESSSSPGVHVRQTKEAPAKLESQAGQV
 SRGARDRVRSMGGHGLRVGALDVPASQFLGSATSPGPRTAPAAKPEKASAGTRVPVQEKTNLAAYVPLL
 TQGWAEILVRRPTGNTSWLMSLENPLSPFSSDINNMPQLQELSNALMAAERFKEHRDTALYKSLSVPAAS
 AKPPPLPRSNTVASFSSLYQSSCQQLHRSVSWADSAVMEEGSPGEVPLVEPPGLEDEVAALGMDRRT
 DAYSRSSVSQEEKSLHAEELVGRGPIIERVVSSEGGSPVDLSFQPSQPLSKSSSSPELQTLQDILGD
 PGDKADVGRLSPEVKARSQSGTLDGESAAWSASGEDSRGQPEGPLSSSPRSPGLRPRGYTISDSAPSR
 RGKRVERDALKSRATASNAEKVPGINPSFVFLQLYHSPFFGDESNKPIILLPNESQSFERSVQLLDQIPSY
 DTHKIAVLYVGEQSNSELAAILSNEHGSYRYTEFLTGLGRLIELKDCQDPKVYLGGLDVCGEDGQFTYCW
 HDDIMQAVFHIAITLMPKTDVDKHRCDDKRHLGNDFVSIYVNDSGEDFKLGTIKGQFNFVHVIVTPLDYEC
 NLVSL

SGPTRRRLEQKLI 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:

5055 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:

185.4 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]