

Product datasheet for **RC402480**

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: | Y1540X |
| Affected Codon#: | 1540 |
| Affected NT#: | 4620 |
| Nucleotide Mutation: | TSC2 Mutant (Y1540X), Myc-DDK-tagged ORF clone of Homo sapiens tuberous sclerosis 2 (TSC2), transcript variant 1 as transfection-ready DNA |
| Effect: | Tuberous sclerosis |
| Symbol: | TSC2 |
| 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: | 4617 bp |
| Restriction Sites: | SgfI-XhoI |
| ORF Nucleotide Sequence: | >RC402480 representing NM_000548 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGGCCAAACCAACAAGCAAAGATTCAGGCTTGAAGGAGAAGTTTAAGATTCTGTTGGGACTGGGAACAC
CGAGGCCAAATCCCAGGTCTGCAGAGGGTAAACAGACGGAGTTTATCATCACCGCGGAAATACTGAGAGA
ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGGCAGATTTGTGAAGTCGAAAAACC
AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTCGCGGATCTGTTGCAGCCGGAGCGGC
CGCTGGAGGCCCGGCACGCGGTCTGGCTCTGCTGAAGCCATCGTGCAGGGGCAGGGCGAGCGTTTGGG
GGTCTCAGAGCCCTCTCTTTAAGGTCATCAAGGATTACCCTTCCAACGAAGACCTTCACGAAAGGCTG
GAGTTTTCAAGGCCCTCACAGACAATGGGAGACACATCACCTACTTGGAGGAAGAGCTGGCTGACTTTG



[View online »](#)

TCCTGCAGTGGATGGATGTTGGCTTGTCTCGGAATTCCTTCTGGTGCTGGTGAACCTGGTCAAATTCAA
 TAGCTGTTACCTCGACGAGTACATCGCAAGGATGGTTCAGATGATCTGTCTGCTGTGCGTCCGGACCGCG
 TCCTCTGTGGACATAGAGGTCTCCCTGCAGGTGCTGGACGCCGTGGTCTGCTACAACCTGCCTGCCGGCTG
 AGAGCCTCCCGCTGTTTCATCGTTACCCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG
 GAAGCTGATGCGGAACCTCCTTGGCACCCACCTGGGCCACAGCGCCATCTACAACATGTGCCACCTCATG
 GAGGACAGACCTACATGGAGGACGCGCCCTGCTGAGAGGAGCCGTGTTTTTGTGGCGATGGCTCTCT
 GGGGAGCCACCGGCTATTCTCTCAGGAATCGCCGACATCTGTGTTGCCATATTTTACCAGGCCAT
 GGCAATGTCGGAACGAGGTGGTGTCTATGAGATCGTCCGTCCATCACCAGGCTCATCAAGAAAGTATAGG
 AAGGAGCTCCAGGTGGTGGCGTGGGACATTCTGCTGAACATCATCGAACGGCTCCTTACAGAGCTCCAGA
 CCTTGGACAGCCCGGAGCTCAGGACCATCGTCCATGACCTGTTGACCACGGTGGAGGAGCTGTGTGACCA
 GAACGAGTTCACGGGTCTCAGGAGAGATACTTGAACGGTGGAGAGATGTGCGGACCAGAGGCCTGAG
 TCCTCCCTCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA
 ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCCGAGGCGCCGTGCGCATCAAGGTGCTGGA
 CGTGTCTCCTTTGTGCTGCTCATCAACAGGCAGTTCTATGAGGAGGAGCTGATTAACCTAGTGGTCATC
 TCGCAGCTCTCCACATCCCGAGGATAAAGACCACCAGTCCGAAAGCTGGCCACCCAGTTGCTGGTGG
 ACCTGGCAGAGGGCTGCCACACACACCACTTCAACAGCCTGCTGGACATCATCGAGAAGGTGATGGCCCC
 CTCCCTCTCCCCACCCCGGAGCTGGAAGAAAGGGATGTGGCCGCATACTCGGCCCTCCTTGGAGGATGTG
 AAGACAGCCGTCTGGGGCTTCTGGTCACTTTCAGACCAAGCTGTACACCCTGCCTGCAAGCCACGCCA
 CGCGTGTGATGAGATGCTGGTCCAGCCACATTCAGTCCACTACAAGCACAGCTACACCCTGCCAATCGC
 GAGCAGCATCCGGCTGCAGGCCCTTGTACTTCTGTTGCTGCTGCGGGCCGACTCACTGCACCCGCTGGGC
 CTGCCAACAAAGGATGGAGTGTGCGGTTCCAGCCCTACTGCGTCTGCGACTACATGGAGCCAGAGAGAG
 GCTCTGAGAAGAAGACCAGCGGCCCTTCTCCTCCACAGGGCCTCCTGGCCCGCGCCTGCAGGCC
 CGCCGCTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTCCGCGTCTGCTGCAGTGTGAAGCAGGAG
 TCTGACTGGAAGGTGCTGAAGCTGGTTCTGGGCAGGCTGCCTGAGTCCCTGCGCTATAAAGTGTCTACT
 TTACTTCCCCTTGCAGTGTGGACCAGCTGTGCTGCTCTGCTCCATGCTTTTACAGGCCAAAGACACT
 GGAGCGGCTCCGAGGCGCCCAAGGCTTCTCCAGAAGTACTGACCTGGCCGTGGTTCAGTGTG
 ACAGCATTAACTCTTACCATAACTACCTGGACAAAACCAACAGCGGAGATGGTCTACTGCCTGGAGC
 AGGGCCTCATCCACCGCTGTGCCAGCCAGTGCCTGCTGGCCTTGTCCATCTGCAGCGTGGAGATGCCTGA
 CATCATCATCAAGGCGCTGCCTGTTCTGGTGGTGAAGCTCACGCACATCTCAGCCACAGCCAGCATGGCC
 GTCCACTGCTGGAGTTCCTGTCCACTCTGCCAGGCTGCCGCACCTCTACAGGAACTTGGCCGGGAGC
 AGTATGCCAGTGTGTTGCCATCTCCCTGCCGTACACCAACCCCTCAAGTTTAAATCAGTACATCGTGTG
 TCTGGCCCATCAGCTCATAGCCATGTGGTTTCATCAGGTGCCGCTGCCCTTCCGGAAGGATTTTGTCCCT
 TTCATCTACTAAGGGCCTGCGGTCCAATGTCTCTTGTCTTTTGTGATGACACCCCGAGAAGGACAGCTTCA
 GGGCCCGGAGTACTAGTCTCAACGAGAGACCAAGAGTCTGAGGATAGCCAGACCCCCCAACAAGGCTT
 GAATAACTCTCCACCCGTGAAAGAAATCAAGGAGAGCTCTGCAGCCGAGGCCCTCCGGTGGCCGAGCATC
 AGTGTGTCTGAACATGTGGTCCGAGCAGGATACAGACGTCCTCACCAGTGGCAGCTTGGGGTCTGCAG
 ATGAGAAGTCCGTGGCCAGGCTGACGATAGCCTGAAAAACCTCCACCTGGAGCTCACGGAAACCTGTCT
 GGACATGATGGCTCGATACGCTTCTCCAACCTCACGGCTGTCCGAAGAGGTCTCCTGTGGGCGAGTTC
 CTCTAGCGGGTGGCAGGACAAAACCTGGCTGGTTGGGAACAAGCTTGTACTGTGACGACAAGCGTGG
 GAACCGGGACCCGGTCTTACTAGGCCCTGGACTCGGGGGAGCTGCAGTCCGGCCCGGAGTCCGAGCTCCAG
 CCCCAGGGTGCATGTGAGACAGACCAAGGAGGCCCGGCAAGCTGGAGTCCCAGGCTGGGCAGCAGGTG
 TCCCGTGGGGCCCGGATCGGGTCCGTTCCATGTGCGGGGGCCATGGTCTTCGAGTTGGCGCCCTGGACG
 TGCCGGCTCCCAGTTCTGGGCAGTGCCTTCTCCAGGACCACGGACTGCACCAGCCGCGAAACCTGA
 GAAGGCCTCAGCTGGCACCCGGTTCCTGTGACAGGAGAAGACGAACCTGGCGGCCTATGTCCCCCTGCTG
 ACCCAGGGCTGGGCGGAGATCCTGGTCCGGAGGCCACAGGGAACACCAGCTGGTGTGAGCCTGGAGA
 ACCCGCTCAGCCCTTCTCCTCGGACATCAACAACATGCCCTGCAGGAGCTGTCTAACCCCTCATGGC
 GGCTGAGCGCTTCAAGGAGCACCGGGACACAGCCCTGTACAAGTCACTGTGGTGGCCGAGCCAGCAGC
 GCCAAACCCCTCCTCTGCCTCGCTCCAACACAGTGGCTCTTCTCCTCCCTGTACCAGTCCAGCTGCC
 AAGGACAGCTGCACAGGAGCGTTTCTGGGCAGACTCCGCCGTGGTTCATGGAGGAGGGAAGTCCGGGCGA
 GGTTCTGTGCTGGTGGAGCCCCAGGGTTGGAGGACGTTGAGGCAGCGCTAGGCATGGACAGGCGCAGC
 GATGCCTACAGCAGGTGCTCCTCAGTCTCCAGCCAGGAGGAGAAGTGCCTCCACGCGGAGGAGCTGGTTG
 GCAGGGGCATCCCATCGAGCGAGTGTCTCCTCGGAGGGTGGCCGGCCCTGTGGACCTCTCCTTCCA

GCCCTCGCAGCCCTGAGCAAGTCCAGCTCCTCTCCCGAGCTGCAGACTCTGCAGGACATCCTCGGGGAC
 CCTGGGGACAAGGCCGACGTGGGCCGGCTGAGCCCTGAGGTTAAGGCCGGTACAGTCAGGGACCTGG
 ACGGGAAAGTGTGCTGGTGGCCTCGGGCGAAGACAGTCGGGGCCAGCCGAGGGTCCCTTGCCCTTC
 CAGTCCCCCGCTCGCCAGTGGCCTCCGGCCCCGAGGTTACACCATCTCCGACTCGGGCCCATCACGC
 AGGGCAAGAGAGTAGAGAGGGACGCCCTTAAGAGCAGAGCCACAGCCTCAATGCAGAGAAAGTGCCAG
 GCATCAACCCAGTTTCGTGTTCTGCAGCTCTACCATTCCCCCTTCTTTGGCGACGAGTCAAACAAGCC
 AATCCTGCTGCCAATGAGTCACAGTCCTTTGAGCGGTGGTGCAGCTCCTCGACCAGATCCCATCA

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

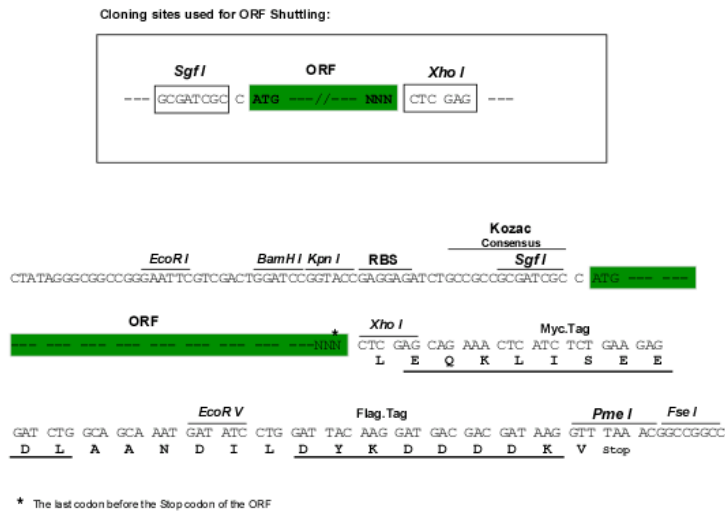
>RC402480 representing NM_000548
 Red=Cloning site Green=Tags(s)

MAKPTSKDGLKEFKILLGLGTPRPNRPSAEGKQTEFIITAEILRELMECGLNRRIRMIQICEVAKT
 KKFEHAEVALWKAVADLLQPERPLEARHAVLALLKAIVQGQGERLGVLRALFFKVIKDYPNSNEDLHERL
 EVFKALTDNGRHITYLEEELADFVLQWMDVGLSSEFLLVNLVKFNACYLDEYIARMVQMICLLCVRATA
 SSVSDIEVSLQVLDAVVCYNCLPAESLPLFIVTLCRTINVKELCEPCWKLNRNLLGTHLGHSAIYNMCHLM
 EDRAYMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNVVSYEIVLSITRLIKRYR
 KELQVVAWDILLNIERLLQQLQTLDSPELRTIVHDLLTTVEELCDQNEFHGSQERYFELVERCADQRPE
 SLLNLISYRAQSIHPAKDGIQNLQALMERFRSESRGAVRIKVLVDLVSFVLLINRQFYEEELINSVVI
 SQLSHIPEDKDHQVRKLATQLLDLAEGCHTHHFNSLLDIEKVMARSLSPPELEERDVAAYSASLEDV
 KTAVLGLLVILQTKLYTLPASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLRADSLHRLG
 LPNKDGVVRFSPYCVCDYMEPERGSEKKTSGPLSPPTGPPGPAPAGPAVRLGSPVYSLFRVLLQCLKQE
 SDWKVLKLVLRGRLPESLRYKVLIFTSPCSVDQLCSALCSMLSGPKTLERLRGAPEGFRTDLHLAVVPVL
 TALISYHNYLDKTKQREMVYCLEQGLIHRCASQCVALSICSVEMPDIIKALPVLVVKLTHISATASMA
 VPLLEFLSTLARLPHLYRNFAAEQYASVFAISLPYTNPSKFNQYIVCLAHVVIAMWFIRCRLPFRKDFVP
 FITKGLRSNVLLSFDDTPEKDSFRARSTSLNERPKSLRIARPPKQGLNNSPPVKEFKESSAAEAFRCRSI
 SVSEHVRSRIQTSLSASLGSADENVAQADDSLKNLHLELTETCLDMMARYVFSNFTAVPKRSPVGEF
 LLAGGRTKTWLVGNKLVTVTTSVGTGTRSLGLDSEGLQSGPESSSSPGVHVRQTKAPAKLESQAGQQV
 SRGARDVRMSGGHGLRVGALDVPASQFLGSATSPGPRTAPAAKPEKASAGTRVPVQEKTNLAAYVPLL
 TQGWAEILVRRPTGNTSWLMSLENPLSPFSSDINNMPQLQELSNALMAAERFKEHRDTALYKSLVPAAST
 AKPPPLPRSNTVASFSSLYQSSCQQLHRSVSWADSAVMEEGSPGEVPVLEPPGLEDEVAALGMDRRT
 DAYSRSSSVSSQEEKSLHAEELVGRGIPIERVVSSEGGRPVDSLFSQPSQPLSKSSSSPELQTLQDILGD
 PGDKADVGRLSPEVKARSQSGTLDGESAAWSASGEDSRGQPEGPLSSSSPRSPGLRPRGYTISDSAPSR
 RGRKVERDALKSRATASNAEKVPGINPSFVFLQLYHSPFFGDESNKPIILLPNESQSFERSVQLLDQIPS

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).

RefSeq:

[NP_000539](#)

RefSeq Size:

4617 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: | 169.3 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] |