

Product datasheet for **RC402458**

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:	E1426X
Affected Codon#:	1426
Affected NT#:	4276
Nucleotide Mutation:	TSC2 Mutant (E1426X), 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:	4275 bp
Restriction Sites:	SgfI-XhoI
ORF Nucleotide Sequence:	>RC402458 representing NM_000548 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCAAACCAACAAGCAAAGATTCAGGCTTGAAGGAGAAGTTAAGATTCTGTTGGGACTGGGAACAC
CGAGGCCAAATCCCAGGTCTGCAGAGGGTAAACAGACGGAGTTTATCATCACCGCGGAAATACTGAGAGA
ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGGCAGATTTGTGAAGTCGAAAAACC
AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTCGCGGATCTGTTGCAGCCGGAGCGGC
CGCTGGAGGCCCGCACGCGGTCTGGCTCTGCTGAAGCCATCGTGCAGGGGCAGGGCGAGCGTTTGGG
GGTCTCAGAGCCCTCTCTTTAAGGTCAAGGATTACCCTTCCAACGAAGACCTTCACGAAAGGCTG
GAGTTTTCAAGGCCCTCACAGACAATGGGAGACACATCACCTACTTGGAGGAAGAGCTGGCTGACTTTG



[View online »](#)

TCCTGCAGTGGATGGATGTTGGCTTGCTCCTCGGAATTCCTTCTGGTGCTGGTGAACCTGGTCAAATTCAA
 TAGCTGTTACCTCGACGAGTACATCGCAAGGATGGTTCAGATGATCTGTCTGCTGTGCGTCCGGACCGCG
 TCCTCTGTGGACATAGAGGTCTCCCTGCAGGTGCTGGACGCCGTGGTCTGCTACAACCTGCCTGCCGGCTG
 AGAGCCTCCCGCTGTTTCATCGTTACCCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG
 GAAGCTGATGCGGAACCTCCTTGGCACCACCTGGGCCACAGCGCCATCTACAACATGTGCCACCTCATG
 GAGGACAGACCTACATGGAGGACGCGCCCTGCTGAGAGGAGCCGTGTTTTTGTGGCGATGGCTCTCT
 GGGGAGCCACCAGCTATTCTCTCAGGAATCGCCGACATCTGTGTTGCCATATTTTACCAGGCCAT
 GGCAATGTCGGAACGAGGTGGTGTCTATGAGATCGTCCGTCCATCACCAGGCTCATCAAGAAAGTATAGG
 AAGGAGCTCCAGGTGGTGGCGTGGGACATTCTGCTGAACATCATCGAACGGCTCCTTCCAGAGCTCCAGA
 CCTTGGACAGCCCGGAGCTCAGGACCATCGTCCATGACCTGTTGACCACGGTGGAGGAGCTGTGTGACCA
 GAACGAGTTCACGGGTCTCAGGAGAGATACTTGAACCTGGTGGAGAGATGTGCGGACCAGAGGCCTGAG
 TCCTCCCTCCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA
 ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCCGAGGCGCCGTGCGCATCAAGGTGCTGGA
 CGTGTCTCCTTTGTGCTGCTCATCAACAGGCAGTTCTATGAGGAGGAGCTGATTAACCTAGTGGTCATC
 TCGCAGCTCTCCACATCCCGAGGATAAAGACCACCAGTCCGAAAGCTGGCCACCCAGTTGCTGGTGG
 ACCTGGCAGAGGGCTGCCACACACACCCTTCAACAGCCTGCTGGACATCATCGAGAAGGTGATGGCCCC
 CTCCCTCTCCCCACCCCGGAGCTGGAAGAAAGGGATGTGGCCGCATACTCGGCCCTCCTTGGAGGATGTG
 AAGACAGCCGTCTGGGGCTTCTGGTCACTTTCAGACCAAGCTGTACACCCTGCCTGCAAGCCACGCCA
 CGCGTGTGATGAGATGCTGGTCCAGCCACATTCAGTCCACTACAAGCACAGCTACACCCTGCCAATCGC
 GAGCAGCATCCGGCTGCAGGCCCTTGTACTTCTGTTGCTGCTGCGGGCCGACTCACTGCACCCGCTGGGC
 CTGCCAACAAAGGATGGAGTGTGCGGTTCCAGCCCTACTGCGTCTGCGACTACATGGAGCCAGAGAGAG
 GCTCTGAGAAGAAGACCAGCGGCCCTTCTCCTCCACAGGGCCTCCTGGCCCGCGCCTGACAGGCC
 CGCCGCTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTCCGCGTCTGCTGCACTGTGAAGCAGGAG
 TCTGACTGGAAGGTGCTGAAGCTGGTTCGGGAGGCTGCCTGAGTCCCTGCGCTATAAAGTGTCTACT
 TTACTTCCCCTTGCAGTGTGGACCAGCTGTGCTGCTCTGCTCCATGCTTTTCCAGGCCAAAGACACT
 GGAGCGCTCCGAGGCGCCCAAGGCTTCTCCAGAAGTACTGACCTGGCCGTGGTTCAGTGTG
 ACAGCATAAATCTTACCATAACTACCTGGACAAAACCAACAGCGGAGATGGTCTACTGCCTGGAGC
 AGGGCCTCATCCACCGCTGTGCCAGCCAGTGCCTGCTGGCCTTGTCCATCTGCAGCGTGGAGATGCCTGA
 CATCATCATCAAGGCGCTGCCTGTTCTGGTGGTGAAGCTCACGCACATCTCAGCCACAGCCAGCATGGCC
 GTCCACTGCTGGAGTTCCTGTCCACTCTGCCAGGCTGCCGCACCTCTACAGGAACTTTGCCCGGAGC
 AGTATGCCAGTGTGTTGCCATCTCCCTGCCGTACACCAACCCCTCAAGTTAATCAGTACATCGTGTG
 TCTGGCCATCAGCTCATAGCCATGTGGTTCATCAGGTGCCGCTGCCCTTCCGGAAGGATTTTGTCCCT
 TTCATCTAAGGGCCTGCGGTCCAATGTCTCTTGTCTTTTGTGATGACACCCCGAGAAGGACAGCTTCA
 GGGCCCGGAGTACTAGTCTAACGAGAGACCAAGAGTCTGAGGATAGCCAGACCCCAAAACAGGCTT
 GAATAACTCTCCACCCGTGAAAGAAATCAAGGAGAGCTCTGCAGCCGAGGCCCTCCGGTCCCGCAGCATC
 AGTGTGTCTGAACATGTGGTCCGAGCAGGATACAGACGTCCTCACCAGTGGCAGCTTGGGGTCTGCAG
 ATGAGAAGTCCGTGGCCAGGCTGACGATAGCCTGAAAAACCTCCACCTGGAGCTCACGGAAACCTGTCT
 GGACATGATGGCTCGATACGCTTCTCCAACCTCACGGCTGTCCGAAAGAGTCTCCTGTGGGCGAGTTC
 CTCTAGCGGGTGGCAGGACAAAACCTGGCTGGTGGGAACAAGCTTGTACTGTGACGACAAGCGTGG
 GAACCGGACCCGGTCTTACTAGGCCCTGGACTCGGGGAGCTGCAGTCCGGCCCGGAGTCCAGCTCCAG
 CCCCAGGGTGCATGTGAGACAGACCAAGGAGGCCCGGCAAGCTGGAGTCCAGGCTGGGCAGCAGGTG
 TCCCGTGGGGCCCGGATCGGGTCCGTTCCATGTCCGGGGGCCATGGTCTTCGAGTTGGCGCCCTGGACG
 TGCCGGCTCCAGTTCTGGGCAGTGCCTTCTCCAGGACCAGGACTGCACCAGCCGCAAACTGGA
 GAAGGCCTCAGCTGGCACCCTGGTCTGTGAGGAGAAGACGAACCTGGCGGCCTATGTCCCCCTGCTG
 ACCCAGGGCTGGGCGGAGATCCTGGTCCGGAGGCCACAGGGAACACCAGCTGGTGTGAGCCTGGAGA
 ACCCGCTCAGCCCTTCTCCTCGACATCAACAACATGCCCTGCAGGAGCTGTCTAACCCCTCATGGC
 GGCTGAGCGCTTCAAGGAGCACCAGGACACAGCCCTGTACAAGTCACTGTGGTCCGGCAGCCAGCAGC
 GCCAAACCCCTCCTCTGCCTCGCTCCAACACAGTGGCTCTTCTCCTCCTGTACCAGTCCAGCTGCC
 AAGGACAGCTGCACAGGAGCTTCTTCTGGGCGACTCCGCCGTGGTTCATGGAGGAGGGAAGTCCGGGCGA
 GGTTCTGTGCTGGTGGAGCCCCAGGGTTGGAGGACGTTGAGGCAGCGCTAGGCATGGACAGGCGCAGC
 GATGCCTACAGCAGGTGCTCCTCAGTCTCCAGCCAGGAGGAGAAGTGCCTCCACGCGGAGGAGCTGGTTG
 GCAGGGGCATCCCATCGAGCGAGTGTCTCCTCGAGGGTGGCCGGCCCTGTGGACCTCTCCTTCCA

GCCCTCGAGCCCTGAGCAAGTCCAGCTCCTCTCCCGAGCTGCAGACTCTGCAGGACATCCTCGGGGAC
 CCTGGGGACAAGGCCGACGTGGGCCGGCTGAGCCCTGAGGTTAAGGCCGGTACAGTCAGGGACCTGG
 ACGGG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

>RC402458 representing NM_000548
 Red=Cloning site Green=Tags(s)

MAKPTSKDSSLKEKFKILLGLGTPRPNRPAEKGQTEFIITAEILRELSMECGLNRRMIGQICEVAKT
 KKFEHVEALWKAVADLLQPERPEARHAVLALLKAIYVQGGERLGLRALFFKVIKDYPNSNEDLHERL
 EVFKALTDNGRHITYLEELADFVLRQWMDVGLSSEFLLVLVNLVKFNCSYLDEYIARMVQMICLCLCVRTA
 SSVYIEVSLQVLDVAVVCYNCLPAESLPLFIVTLCRTINVKELCEPCWKLNRNLLGTHLGHSAIYNMCHLM
 EDRAVMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNEVVSYEIVLSITRLIKKYR
 KELQVVAWDILLNIIERLLQQLQTLDSPELRTIVHDLTTVEELCDQNEFHGSQERYFELVERCADQRPE
 SLLNLSYRAQSIHPAKDGWIQNLQALMERFFRSESRGAVRIKVLVDVLSFVLLINRQFYEEELINSVVI
 SQLSHIPEDKDHQVRKLATQLLVDLAEGCHTHHFNSLLDIEKVMARSLSPPELEERDVAAYSASLEDV
 KTAVLGLLVILQTKLYLPASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLRADSLHRLG
 LPNKDGVVRFSPYCVCDYMEPERGSEKKTSGPLSPPTGPPGAPAGPAVRLGSPYSLLFRVLLQCLKQE
 SDWKVLKLVLRPELRYKVLIFTSPCSVDQLCSALCSMLSGPKTLERLRGAPEGFRTDLHLAVVPL
 TALISYHNYLDKTKQREMYCLEQGLIHRCASQCVALSICSVEMPDIIKALPVLVVKLTHISATASMA
 VPLLEFLSTLARLPHLYRNFAAEQYASVFAISLPYTNPSKFNQYIVCLAHVVIAMWFIRCLPFRKDFVP
 FITKGLRSNVLLSFDTPPEKDSFRARSTSLNERPKSLRIARPPKQGLNNSPPVKEFKESSAAEFRCRSI
 SVSEHVRSRIQTSLSASLGSADENSAQADDSLKNLHLELTETCLDMMARYVFSNFTAVPKRSPVGEF
 LLAGGRTKTWLVGNKLVTVTTSVGTGTRSLGLDSGELQSGPESSSPGVHVRQTKEAPAKLESQAGQQV
 SRGARDVRVSMGGHGLRVGALDVPASQFLGSATSPPGRTAPAAKPEKASAGTRVPVQEKTNLAAYVPLL
 TQGWAEILVRRPTGNTSWLMSLENPLSPFSSDINNMPQLQELSNALMAAERFKEHRDTALYKLSVPAAST
 AKPPPLPRSNVASFSSLYQSSCQQLHRSVSWADSAVMEEGSPGEVPLVEPPGLEDEAALGMDRRT
 DAYSRSSSVSSQEEKSLHAEELVGRGIPIERVVSSEGGRRPSVDLSFQPSQPLSKSSSSPELQTLQDILGD
 PGDKADVGRLSPEVKARSQSGTLDG

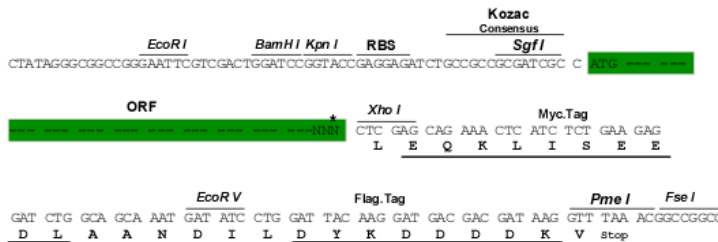
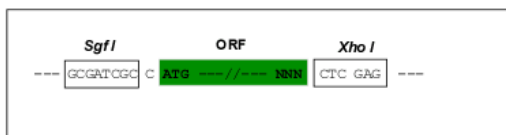
SGPTRRRLQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-XhoI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* 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).
RefSeq:	NP_000539
RefSeq Size:	4275 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:	156.8 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]