

## Product datasheet for **RC402391**

### 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:	E787X
Affected Codon#:	787
Affected NT#:	2359
Nucleotide Mutation:	TSC2 Mutant (E787X), 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:	2358 bp
Restriction Sites:	SgfI-XhoI



[View online »](#)

**ORF Nucleotide Sequence:**

>RC402391 representing NM\_000548  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCAAACCAACAAGCAAAGATTAGGCTTGAAGGAGAAGTTAAGATTCTGTGGGACTGGGAACAC  
 CGAGGCCAAATCCAGGTCTGCAGAGGGTAAACAGACGGATTTATCATCACCGGAAATACTGAGAGA  
 ACTGAGCATGGAATGTGGCCTCAACAATCGCATCCGGATGATAGGGCAGATTTGTGAAGTCGAAAAACC  
 AAGAAATTTGAAGAGCACGCAGTGAAGCACTCTGGAAGGCGGTGCGGGATCTGTTGCAGCCGGAGCGGC  
 CGCTGGAGGCCCGGCACGCGGTCTGGCTCTGCTGAAGGCCATCGTGCAGGGCAGGGCAGCGTTTGGG  
 GGTCTCAGAGCCCTCTCTTTAAGGTCATCAAGGATTACCTTCCAACGAAGACCTTACGAAAGGCTG  
 GAGTTTTCAAGGCCCTCACAGACAATGGGAGACATCACCTACTTGGAGGAAGAGCTGGCTGACTTTG  
 TCCTGCAGTGGATGGATGTTGGCTTGTCTCGGAATTCCTTCTGGTGTGGTGAACCTGGTCAAATCAA  
 TAGCTGTTACCTCGACGAGTACATCGCAAGGATGGTTCAGATGATCTGTCTGCTGTGCGTCCGGACCGCG  
 TCCTCTGTGGACATAGAGGTCTCCCTGCAGGTGCTGGACGCCGTGGTCTGCTACAACCTGCCGCGCTG  
 AGAGCCTCCCGCTGTTTATCGTTACCCTCTGTGCGACCATCAACGTCAAGGAGCTCTGCGAGCCTTGCTG  
 GAAGCTGATGCGGAACCTCCTTGGCACCCACCTGGGCCACAGCGCCATCTACAACATGTGCCACCTCATG  
 GAGGACAGAGCCTACATGGAGGACGCGCCCTGCTGAGAGGAGCCGTGTTTTTGTGGGCATGGCTCTCT  
 GGGGAGCCACCGGCTCTATTCTCTCAGGAACCTGCGGACATCTGTGTTGCCATCATTTTACCAGGCCAT  
 GGCATGTCCGAACGAGGTGGTGTCTATGAGATCGTCTGTCCATCACCAGGCTCATCAAGAAGTATAGG  
 AAGGAGCTCCAGTGGTGGCGTGGGACATCTGCTGAACATCATCGAACGGCTCCTTCAAGCAGCTCCAGA  
 CCTTGGACAGCCCGGAGCTCAGGACCATCGTCCATGACCTGTTGACCAGGTGGAGGAGCTGTGTACCA  
 GAACGAGTCCACGGGTCTCAGGAGAGATACTTTGAACTGGTGGAGAGATGTGCGGACCAGAGGCCTGAG  
 TCCTCCCTCTGAACCTGATCTCTATAGAGCGCAGTCCATCCACCCGGCCAAGGACGGCTGGATTGAGA  
 ACCTGCAGGCGCTGATGGAGAGATTCTCAGGAGCGAGTCCCGAGGCGCCGTGCGCATCAAGGTGCTGGA  
 CGTGTCTCCTTTGTGCTGCTCATCAACAGGAGTCTATGAGGAGGAGCTGATTAACCTCAGTGGTCTATC  
 TCGCAGCTCTCCACATCCCCGAGGATAAAGACCACCAGGTCCGAAAGCTGGCCACCCAGTTGCTGGTGG  
 ACCTGGCAGAGGGCTGCCACACACCACTTCAACAGCCTGCTGGACATCATCGAGAAGGTGATGGCCCG  
 CTCCTCTCCCCACCCCGAGCTGGAAGAAAGGGATGTGGCCGATACTCGGCCTCCTTGGAGGATGTG  
 AAGACAGCCGCTCTGGGGCTTCTGGTATCCTTCAGACCAAGCTGTACCCCTGCCTGCAAGCCACGCCA  
 CGCGTGTGTATGAGATGCTGGTCAAGCCATTCAGTCCACTACAAGCACAGCTACACCCCTGCCAATCGC  
 GAGCAGCATCCGGCTGCAGGCCTTTGACTTCTGTTGCTGCTGCGGGCCGACTCACTGCACCCGCTGGGC  
 CTGCCAAACAAGGATGGAGTCTGCGGTTAGCCCTACTGCGTCTGCGACTACATGGAGCCAGAGAGAG  
 GCTCTGAGAAGAAGACCAGCGGCCCTTTCTCCTCCACAGGGCCTCTGGCCCGGCGCTGCAGGCC  
 CGCCGTGCGGCTGGGGTCCGTGCCCTACTCCCTGCTCTCCGCGTCTGCTGCAGTGTGTAAGCAGGAG  
 TCTGACTGGAAGGTGCTGAAGCTGGTCTGGGACGGCTGCCTGAGTCCCTGCGCTATAAAGTGTCTATCT  
 TTACTTCCCCTTGCAGTGTGACAGCTGTGCTCTGCTCTGCTCCATGCTTTCAGGCCAAAGACT  
 GGAGCGGCTCCGAGCGCCCGAAGGCTTCTCCAGAACTGACTTGCACCTGGCCGTGGTCCAGTGTCTG  
 ACAGCATTAACTCTTACCATAACTACCTGGACAAAACCAACAGCGC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:** >RC402391 representing NM\_000548  
 Red=Cloning site Green=Tags(s)

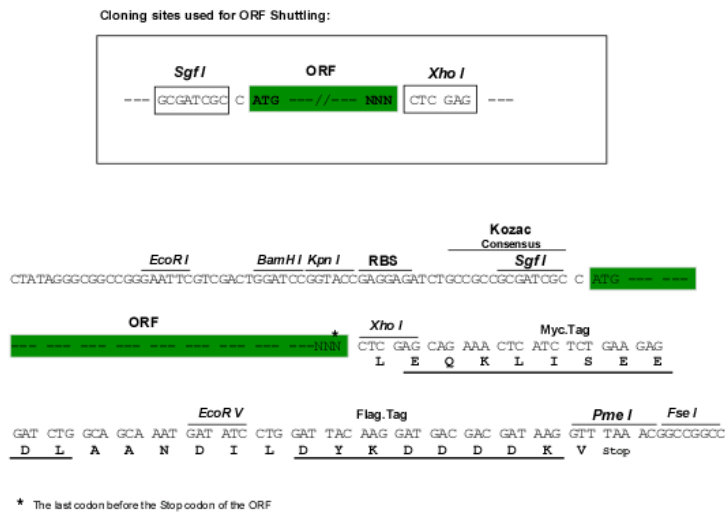
```

MAKPTSKDGLKEKFKILLGLGTPRPNRPAEGKQTEFIITAEILRELSMECGLNRRIRMIGQICEVAKT
KKFEEHAVEALWKAVADLLQPERPEARHAVLALLKAIVQGGERLGLRALFFKVIKDYP SNEDLHERL
EVFKALTDNGRHITYLEEELADFVLQWMDVGLSSEFLLVLVNLVKFNCSYLDEYIARMVQMICLLCVRTA
SSVDIEVSLQVLDAVVCYNCLPAESLPLFIVTLCRTINVKELCEPCWKLMRNLLGTHLGHSAIYNMCHLM
EDRAYMEDAPLLRGAVFFVGMALWGAHRLYSLRNSPTSVLPSFYQAMACPNVVSYEIVLSITRLLIKKYR
KELQVVAWDILLNIIERLLQQLQTLDSPELRTIVHDLLTTVEELCDQNEFHGSQERYFELVERCADQRPE
SSLLNLSYRAQSIHPAKDGWIQNLQALMERFFRSESRGAVRIKVLVDLVSFVLLINRQFYEEELINSVVI
SQLSHIPEDKDHQVRKLATQLLVDLAEGCHTHHFNSLLDIEKVMARSLSPPELEERDVAAYSASLEDV
KTAVLGLLVILQTKLYLPASHATRVYEMLVSHIQLHYKHSYTLPIASSIRLQAFDFLLLRADSLHRLG
LPNKDGVVRFSPYCVCDYMEPERGSEKKTSGPLSPPTGPPGAPAGPAVRLGSPYSLLFRVLLQCLKQE
SDWKVLKLVGLRPELRYKVLIFTSPCSVDQLCSALCSMLSGPKTLERLRGAPEGF SRTDLHLAVVPVL
TALISYHNYLDKTKQR
  
```

SGP TRRRLEQKLI 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.

<b>Components:</b>	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).
<b>RefSeq:</b>	<a href="#">NP_000539</a>
<b>RefSeq Size:</b>	2358 bp
<b>RefSeq ORF:</b>	5424 bp
<b>Locus ID:</b>	7249
<b>Cytogenetics:</b>	16p13.3
<b>Domains:</b>	Rap_GAP, Tuberin
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Insulin signaling pathway, mTOR signaling pathway, p53 signaling pathway
<b>MW:</b>	86.5 kDa
<b>Gene Summary:</b>	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]