

## Product datasheet for **RC221333**

### Tuberin (TSC2) (NM\_001077183) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Tuberin (TSC2) (NM_001077183) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TSC2
Synonyms:	LAM; PPP1R160; TSC4
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC221333 representing NM_001077183 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**CGATCGCC**

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GCGCCTCATCTCCTCGGTGGAGGACTTACCGAGTTTGTG

CTCGAGCAGAAACTCATCTCTGAAGAGGATCTGGCAGCAAATGATATCCTGGATTACAAGGATGACGACG  
ATAAGGTTTAA

**Protein Sequence:**

>RC221333 representing NM\_001077183  
Red=Cloning site Green=Tags(s)

MAKPTSKDSSLKEKFKILLGLGTPRPNPRAEGKQTEFIITAEILRELSMECGLNNRIRMIGQICEVAKT  
KKFEEHAVEALWKAVADLLQPERPLEARHAVLALLKAIVQGQGERLGVLRALFFKVIKDYPSNEDLHERL  
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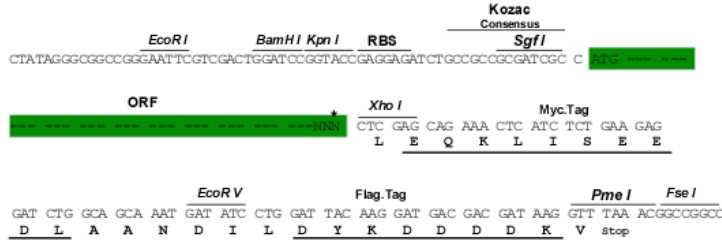
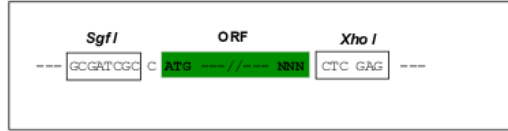
LEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

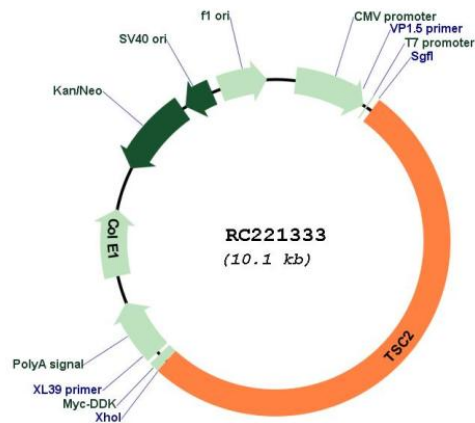
SgfI-XhoI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_001077183

**ORF Size:** 5220 bp

**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).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_001077183.2](#)

**RefSeq Size:** 5474 bp

**RefSeq ORF:** 5223 bp

**Locus ID:** 7249

**UniProt ID:** [P49815](#)

**Cytogenetics:** 16p13.3

<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Insulin signaling pathway, mTOR signaling pathway, p53 signaling pathway
<b>MW:</b>	193.1 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]