

## Product datasheet for RC228640L3

#### OriGene Technologies, Inc.

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# Hamartin (TSC1) (NM\_001162427) Human Tagged Lenti ORF Clone

### **Product data:**

**Product Type:** Expression Plasmids

Product Name: Hamartin (TSC1) (NM\_001162427) Human Tagged Lenti ORF Clone

Tag: Myc-DDK
Symbol: Hamartin
Synonyms: LAM; TSC
Mammalian Cell Puromycin

Selection:

**Vector:** pLenti-C-Myc-DDK-P2A-Puro (PS100092)

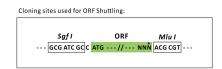
E. coli Selection: Chloramphenicol (34 ug/mL)

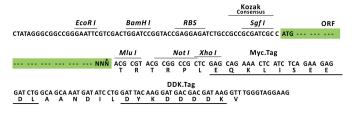
ORF Nucleotide The ORF insert of this clone is exactly the same as(RC228640).

Sequence:

Sgfl-Mlul

Restriction Sites: Cloning Scheme:





<sup>\*</sup> The last codon before the Stop codon of the ORF.

**ACCN:** NM\_001162427

ORF Size: 3339 bp





### Hamartin (TSC1) (NM\_001162427) Human Tagged Lenti ORF Clone - RC228640L3

**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:** <u>NM 001162427.1</u>

 RefSeq ORF:
 3342 bp

 Locus ID:
 7248

 UniProt ID:
 Q92574

Cytogenetics: 9q34.13

**MW:** 123.8 kDa

**Protein Pathways:** 

**Gene Summary:** This gene is a tumor suppressor gene that encodes the growth inhibitory protein hamartin.

Insulin signaling pathway, mTOR signaling pathway

The encoded protein interacts with and stabilizes the GTPase activating protein tuberin. This hamartin-tuberin complex negatively regulates mammalian target of rapamycin complex 1 (mTORC1) signalling which is a major regulator of anabolic cell growth. This protein also functions as a co-chaperone for Hsp90 that inhibits its ATPase activity. This protein functions as a facilitator of Hsp90-mediated folding of kinase and non-kinase clients, including Tsc2 and thereby preventing their ubiquitination and proteasomal degradation. Mutations in this gene

have been associated with tuberous sclerosis. [provided by RefSeq, Apr 2018]