

Product datasheet for **SC327275**

Hamartin (TSC1) (NM_001162427) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hamartin (TSC1) (NM_001162427) Human Untagged Clone
Tag:	Tag Free
Symbol:	TSC1
Synonyms:	LAM; TSC
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001162427, the custom clone sequence may differ by one or more nucleotides

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ATGGCCCAACAAGCAAATGTCGGGGAGCTTCTTGCCATGCTGGACTCCCCATGCTGGGT
GTGCGGGACGACGTGACAGCTGTCTTTAAAGAGAACCTCAATTCTGACCGTGGCCCTATG
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CTCCCAGGTTCTCAGCGAAGACCCACTCGGCAGCCTCCAGTTCTCAGGGCGCCAGCGTG
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TTTACTCCCATAGACCTGCCCTGCGGCAGTGCTGATGAAAGCCCTGCGGGAGACAGGGAA
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CGAGACCAGTTGCTTTTACTGCACAACCAAGTACTCTATGAGCGTTTTAAGAGGCAGCAG
CATGCCCTCCGGAACAGGCGGCTCCTCCGCAAGGTGATCAAAGCAGCAGCTCTGGAGGAA
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CCACACCAGAGGGCAGGCCATTTCAGCAGTCGGTGGGAGACGACTATGGGAGAAGCGTCT
GCCAGCATCCCCACCACTGTGGGCTCACTTCCCAGTTCAAAAAGCTTCTGGGTATGAAG
GCTCGAGAGTTATTTTCGTAATAAGAGCGAGAGCCAGTGTGATGAGGACGGCATGACCAGT
AGCCTTTCTGAGAGCCTAAAGACAGAACTGGGCAAGACTTGGGTGTGGAAGCCAAGATT
CCCCTGAACCTAGATGGCCCTCACCCGTCTCCCCGACCCCGGACAGTGTGGACAGCTA
CATATCATGGACTACAATGAGACTCATCATGAACACAGC
    
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- Restriction Sites:** Please inquire
- ACCN:** NM_001162427
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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_001162427.1](#), [NP_001155899.1](#)

RefSeq Size: 8473 bp

RefSeq ORF: 3342 bp

Locus ID: 7248

UniProt ID: [Q92574](#)

Cytogenetics: 9q34.13

Protein Pathways: Insulin signaling pathway, mTOR signaling pathway

Gene Summary: This gene is a tumor suppressor gene that encodes the growth inhibitory protein hamartin. 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]
Transcript Variant: This variant (4) lacks an alternate in-frame exon in the 5' coding region, compared to variant 1. This results in a shorter protein (isoform 3), compared to isoform 1.