

## Product datasheet for MC223091

### Tsc1 (BC052399) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Tsc1 (BC052399) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Tsc1
Synonyms:	hamartin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>BC052399 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGCCCAGTTAGCCAACATTGGGGAGCTGCTCTCCATGCTGGACTCCTCCACACTGGGTGTGCGGGATG  
ACGTGACAGCCATCTTCAAGGAGTCCCTCAATTCTGAACGTGGGCTATGCTTGCAACAGTGGTTGA  
TTATTACCTGGAAACCAATTCTCAGCCGGTATTGCACATCCTGACCACCTTGCAGGAGCCACACGATAAG  
CACCTCTTGGACAAAATTAATGAGTATGTAGGCAAAGCTGCTACCCGTTTATCCATCCTCTCGCTGCTGG  
GGCATGTTGTGAGACTGCAGCCATCTTGAAGCATAAGCTCTCTCAAGCACCTCTTCTGCCTTTCTTATT  
GAAATGTCTAAGATGGACACTGATGTTGTGGTCTCACAACCTGGTGTCTTGGTGTGATCACCATGCTC  
CCGATGATCCCGCAGTCAGGGAAGCAGCACCTTCTCGACTTCTTTGACATCTTTGGCCGTCTCTCGTCAT  
GGTGCCTGAAGAAACCAGGCCATGTGACAGAAGTGTACCTGGTCCATCTTCATGCCAGTGTTCATGCCCCT  
CTTTCACCGCCTTATGGGATGTACCCATGTAACCTCGTCTCCTCCTGCGCTCTCACTACAGTATGAAG  
GAAAACGTGGAGACTTTTGAAGAAGTGGTCAAGCCAATGATGGAGCATGTGCGAATTCACCCGGAATTAG  
TGACTGGATCCAAGGACCATGAACTGGACCCTCGAAGGTGAAGACATTAGAAACTCATGATGTTGTAAT  
AGAGTGTGCCAAAATCTCTGACCCTACAGAAGCCTCGTATGAAGATGGCTATTCTGTGTCACACCAG  
CTCTCTGCTTGCCTTACCCTTACCGTTCAGCTGATGTCACCACCAGCCCTTATGTGGACACACAGAATAGCT  
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TCAGAGTTTGAAGTCCCATCAACACGGCTGTTACCTGAGCCGCTGCAAGCTAGTCTCTGGAGCCCATCT  
GCGGTCTGTGGTATGACCACTCCTCCTACGCTCTCCTGAAATGTCCAGCTGATTTGTACATCCGTATA  
GTAAGCCTTTGGTACCCTGGTGGAAAAGGAACCTCCTCAGGAACCCAGCGACCTCTCCTCCTCCAGC  
CCCACCTTGTCCCAAGATGACTGTGTGCATGGTTCAGCAGCCAGGCCCTCAGCCACAGCCCCAGGAAG  
GAAGAAAGAGCAGATTCTCAAGGCCTTACCTTACAGACAGTCAAACGACCGAGGATTAGAGGATCCAC  
CTGGAAGCAAAGTTCCGTTACTCTGAGGAATCTACCTGATTTCTAGGTGATCTGGCTTCTGAGGAAGA  
CAGTATCGAGAAAGATAAGGAAGAAGCTGCAATATCTAAAGAGCTTTCTGAGATCACTACTGCAGAGGCG  
GATCCTGTAGTTCCTCGAGGGGGCTTACTCTCCCTTACCGAGACAGTCTCTCTGGCTCTCAGCGGA



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AGACTCATTTCGGCAGCCTCTGGGACTCAGGGCTCCAGCGTGAACCCTGAGCCTTTGCACTCCTCCCTGGA
CAAACATGGGCCTGACACACCAAAGCAAGCCTTTACTCCCATAGACCCACCCTCTGGCAGTGCTGATGTC
AGTCCCCTGGGGACAGGGATCGCCAGACTTCTCTGGAGACCAGTATCCTCACTCCCAGCCCTTGCAAAA
TCCCACCTCAGAGGGGAGTGAGCTTTGGAAGTGGGCAGCTTCCCCCATATGATCATCTCTTTGAGGTGGC
CTTGCCAAAGACTGCCTGTCACCTTTGTGAGCAAGAAGACTGAGGAGCTGTTGAAGAAAGTAAAGGAAAC
CCTGAGGAAGACTGTGTGCCCTACCTCCCCAATGGAAGTACTGGACAGACTGATAGAGCAGGGAGCAG
GTGCGCACAGCAAGGAGCTGAGCAGGTTGTCCCTGCCAGCAAGTCTGTTGACTGGACCCACTTTGGAGG
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GAGCGCTTCAAGCGGCAGCAGCATGCACTCAGGAACAGAAGGCTCCTGCGCAAGTGATCCGAGCAGCGG
CTCTGGAGGAACACAATGCAGCAATGAAAGATCAGTTGAAGTTACAAGAGAAGGACATACAGATGTGGAA
GGTGAGTCTGCAGAAAGAACAAGCCGATACAGTCAGCTTTCAGGAACAACGTGACACCATGGTGACCCAA
CTGCATAGCCAGATCAGACAGCTACAGCATGACCGAGAAGAAATTTACAACCAGAGTCAGGAGTTACAGA
CAAAGCTGGAGGACTGCAGAAACATGATTGCGGAGCTTCGGGTGGAGCTGAAGAAGGCTAACAAAGGT
GTGCCACACTGAGCTGCTGCTCAGCCAGGTCTCTCAGAAGCTCTCAACAGTGAGTCAGTGCAGCAGCAG
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GCAAGCATCCTGACACCACAAGGAAGTAGAAATGATGAAAACATCGGAAAGAGCTAGAGAAAAA
CAGAAGCCACCTTCTCCAGCAGAACCAAGGTTGGACGCCTCACAGAGGCGAGTTTTGAACTGGAGTCT
TTCTGGCCAAGAAAGACCACCTTCTCCTAGAACAAGAAATATCTTGAGGATGTCAAGAGCCAGGCGA
GTGGACAGCTGCTGGCTGCAGAGAGCAGGTATGAGGCTCAGAGAAAGATCACCCGGGTGTTGAACTGGA
GATCCTAGACTTGTATGGCAGGTTGAAAAAGATGGCCGCTACGGAAACTAGAAGAGGACAGAGCAGAG
GCAGCAGAGGCAGCAGAAGAGAGGCTTGACTGTTGTAGTGATGGATGCACAGATTCTTGGTAGGACATA
ATGAAGAGGCTTCTGGTCACAATGGTGAGACCAGGACCTCCAGACCTGGTGGCACCCGGGCCAGCTGTGG
AGGTTACAGCAGCATCCCCACCCTGTTGGCTCACTTCCAGTTCCAAAAGCTTCTGGGCATGAAGGCC
GGGAGCTGTTCCGTAATAAGAGCGAGAGCCAGTGTGATGAGGACAGCGTGACCATGAGTAGCAGCAGCCT
TTCTGAGACCCTGAAGACAGAACTGGGCAAGGACTCGGGCACAGAAAACAAGACTTCCCTGAGTCTAGAT
GCCCCACACCCATCTTCCCCAACTCAGACAATGTGGGGCAGCTCCACATCATGGACTACAATGAGACTC
ATCCTGAACACAGCTGA
    
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCTGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA
    
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- Restriction Sites:** SgfI-MluI
- ACCN:** BC052399
- Insert Size:** 3447 bp
- 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).
- 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:** [BC052399](#), [AAH52399](#)

**RefSeq Size:** 4829 bp

**RefSeq ORF:** 3446 bp

**Locus ID:** 64930

**Cytogenetics:** 2 A3

**Gene Summary:** In complex with TSC2, inhibits the nutrient-mediated or growth factor-stimulated phosphorylation of S6K1 and EIF4EBP1 by negatively regulating mTORC1 signaling (By similarity). Implicated as a tumor suppressor. Involved in microtubule-mediated protein transport, but this seems to be due to unregulated mTOR signaling (PubMed:16707451). Acts as a co-chaperone for HSP90AA1 facilitating HSP90AA1 chaperoning of protein clients such as kinases, TSC2 and glucocorticoid receptor NR3C1 (PubMed:29127155). Increases ATP binding to HSP90AA1 and inhibits HSP90AA1 ATPase activity (PubMed:29127155). Competes with the activating co-chaperone AHSA1 for binding to HSP90AA1, thereby providing a reciprocal regulatory mechanism for chaperoning of client proteins (By similarity). Recruits TSC2 to HSP90AA1 and stabilizes TSC2 by preventing the interaction between TSC2 and ubiquitin ligase HERC1 (By similarity).[UniProtKB/Swiss-Prot Function]