

## Product datasheet for MC229423

### Tsc1 (NM\_001289575) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Tsc1 (NM_001289575) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Tsc1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC229423 representing NM_001289575 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGGATCGCC

ATGGCCCAGTTAGCCAACATTGGGGAGCTGCTCTCCATGCTGGACTCCTCCACACTGGGTGTGCGGGATG  
ACGTGACAGCCATCTTCAAGGAGTCCCTCAATTCTGAACGTGGCCTATGCTTGAACACGTTGGTTGA  
TTATTACCTGGAACCAATTCTCAGCCGGTATTGCACATCTGACCACCTGCAGGAGCCACACGATAAG  
CACCTCTTGGACAAAATTAATGAGTATGTAGGCAAAGCTGCTACCCGTTTATCCATCCTCTCGCTGCTGG  
GGCATGTTGTGAGACTGCAGCCATCTTGAAGCATAAAGCTCTCTCAAGCACCTTCTTGCCTTTTATT  
GAAATGTCTCAAGATGGACACTGATGTTGTGGTCTCACAAGTGGTGTCTTGGTGTGATCACCATGCTC  
CCGATGATCCCGCAGTCAGGGAAGCAGCACCTTCTCGACTTCTTGGACATCTTGGCCGTCTCTCGTCAT  
GGTGCCTGAAGAAACCAGGCCATGTGACAGAAGTGTACCTGGTCCATCTCATGCCAGTGTATGCCCCT  
CTTTCACCGCCTTATGGGATGTACCCATGTAACCTTCGTCCTCTCTGCGCTCTCACTACAGTATGAAG  
GAAAACGTGGAGACTTTTGAAGAAGTGGTCAAGCCAATGATGGAGCATGTGCGAATTCACCCGGAATTAG  
TGACTGGATCCAAGGACCATGAACTGGACCCTCGAAGGTGGAAGACATTAGAAACTCATGATGTTGTAAT  
AGAGTGTGCCAAATCTCTCTGGACCCTACAGAAGCCTCGTATGAAGATGGCTATTCTGTGTACACCAG  
CTCTCTGCTTGCCTTACCCTTACCGTTCAGCTGATGTCACCACCAGCCCTTATGTGGACACACAGAATAGCT  
ATGGGGTTTACTTCCACCCCTTCTCCAGCTCTCGGCTGATGTTGTTGAGTCCACCTGGGCAGCTACC  
TCAGAGTTTGAAGTCCCATCAACACGGCTGTTACCTGAGCCGCTGCAAGCTAGTCTCTGGAGCCCATCT  
GCGGTCTGTGGTATGACCACTCCTCCTACGTCCTGAAATGTCCAGCTGATTTGTACATCCGTATA  
GTAAGCCTTTGGTACCCTGCAGGTGAAAAGGAACCTTTCAGGAACCCAGCGACCTCTCTCTCTCC  
AGCCCCACCTTGTCCCCAAGATGACTGTGTGCATGGTTTACGACAGCCAGCCCTCAGCCACAGCCCCAGG  
AAGGAAGAAAGAGCAGATTCTCAAGGCCTTACCTTACAGACAGTCAAACGACCGAGGATTAGAGGATC  
CACCTGGAAGCAAAGGTTCCGTTACTCTGAGGAATCTACCTGATTTCTAGGTGATCTGGCTTCTGAGGA  
AGACAGTATCGAGAAAGATAAGGAAGAAGCTGCAATATCTAAAGAGCTTTCTGAGATCACTACTGCAGAG  
GCGGATCTGTAGTTCTCGAGGGGGCTTTGACTCTCCCTTCTACCGAGACAGTCTCTGGCTCTCAGC  
GGAAGACTCATTGCGCAGCCTCTGGGACTCAGGGCTCCAGCGTGAACCCTGAGCCTTTCAGCTCTCCCT  
GGACAAACATGGGCTGACACACCAAAGCAAGCCTTTACTCCCATAGACCACCCTCTGGCAGTGTGAT



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GTCAGTCCCCTGGGGACAGGGATCGCCAGACTTCTCTGGAGACCAGTATCCTCACTCCCAGCCCTTGCA  
 AAATCCCACCTCAGAGGGGAGTGAAGTTTGAAGTGGGACGCTTCCCCATATGATCATCTCTTTGAGGT  
 GGCCTTGCCAAAGACTGCCTGTCACTTTGTGAGCAAGAAGACTGAGGAGCTGTTGAAGAAAGTAAAAGGA  
 AACCTGAGGAAGACTGTGTGCCCTCTACCTCCCCAATGGAAGTACTGGACAGACTGATAGAGCAGGGAG  
 CAGGTGCGCACAGCAAGGAGCTGAGCAGGTTGTCCCTGCCAGCAAGTCTGTTGACTGGACCCACTTTGG  
 AGGCTCTCCTCCCTCAGATGAGTCCGGACCCTCCGAGACCAGTTGCTTTTACTGCACAATCAGCTGCTG  
 TACGACGCTTCAAGCGGCAGCAGCATGCCTCAGGAACAGAAGGCTCCTGCGCAAGGTGATCCGAGCAG  
 CGGCTCTGGAGGAACACAATGCAGCAATGAAAGATCAGTTGAAGTTACAAGAGAAGGACATACAGATGTG  
 GAAGGTGAGTCTGCAGAAAGAACAAGCCGATACAGTCACTTTCAGGAACAACGTGACACCATGGTGACC  
 CAACTGCATAGCCAGATCAGACAGCTACAGCATGACCGAGAAGAATTCTACAACCAGAGTCAAGGATTAC  
 AGACAAAGCTGGAGGACTGCAGAAACATGATTGCGGAGCTTCCGGTGGAGCTGAAGAAGGCTAACAAACA  
 GGTGTGCCACACTGAGCTGCTGCTCAGCCAGGTTCTCAGAAGCTCTCCAACAGTGAAGTCAAGCAGCAG  
 CAGATGGAGTTCTTGAATAGGCAGCTCCTGGTCTCGGGGAGGTCATGAGCTGTACCTGGAGCAGCTGC  
 AGAGCAAGCATCCTGACACCACAAGGAAGTAGAAATGATGAAAAGTGCATATCGGAAAGAGCTAGAGAA  
 AACAGAAGCCACCTTCCAGCAGAACCAAGGTTGGACGCTCACAGAGGCGAGTTTTTGGAACTGGAG  
 TCTCTTCTGGCCAAGAAAGACCCTTCTCCTAGAACAGAAGAAATATCTTGAGGATGTCAAGAGCCAGG  
 CGAGTGGACAGCTGCTGGCTGCAGAGAGCAGGTATGAGGCTCAGAGAAAGATCACCCGGGTGTTGAACT  
 GGAGATCCTAGACTTGTATGGCAGGTTGGAAAAAGATGGCCGCTACGAAAAGTGAAGAGGACAGAGCA  
 GAGGCAGCAGAGGCAGCAGAAGAGAGGCTTACTGTTGTAGTGTGGATGCACAGATTCTTGGTAGGAC  
 ATAATGAAGAGGCTTCTGGTCACAATGGTGAGACCAGGACCTCCAGACCTGGTGGCACCCGGGCCAGCTG  
 TGGAGGTAGAGTCACTGGAGGCAGCAGCAGCAGCAGCAGTGAAGCTTTCCACTCCAGAGAAACCCCGAGC  
 CAGAGGTTCAAGCAGCCGTTGGAACTGCCCTGGGCGAGCCCTCCAGCAGCATCCCCACCACTGTTGGCT  
 CACTTCCAGTTCCAAAAGCTTCTGGCATGAAGGCCCGGAGCTGTTCCGTAATAAGAGCGAGAGCCA  
 GTGTGATGAGGACAGCGTGACCATGAGTAGCAGCAGCCTTTCTGAGACCCTGAAGACAGAACTGGGCAAG  
 GACTCGGGCACAGAAAACAAGACTTCCCTGAGTCTAGATGCCCCACACCATCTTCCCCAAACTCAGACA  
 ATGTGGGGCAGCTCCACATCATGGACTACAATGAGACTCATCCTGAACACAGTGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_001289575
- Insert Size:** 3486 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).
- OTI Annotation:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
- 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\\_001289575.1](#), [NP\\_001276504.1](#)

**RefSeq Size:** 7732 bp

**RefSeq ORF:** 3486 bp

**Locus ID:** 64930

**UniProt ID:** [Q9EP53](#)

**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]  
Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1).