

Product datasheet for MC223770

Tsc1 (NM_022887) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tsc1 (NM_022887) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Tsc1
Synonyms:	hamartin; mKIAA0243
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC223770 representing NM_022887 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCAGTTAGCCAACATTGGGGAGCTGCTCTCCATGCTGGACTCCTCCACACTGGGTGTGCGGGATG
ACGTGACAGCCATCTTCAAGGAGTCCCTCAATTCTGAACGTGGCCTATGCTTGCAACAGTGGTTGA
TTATTACCTGGAAACCAATTCTCAGCCGGTATTGCACATCCTGACCACCTTGCAGGAGCCACACGATAAG
CACCTCTTGGACAAAATTAATGAGTATGTAGGCAAAGCTGCTACCCGTTTATCCATCCTCTCGCTGCTGG
GGCATGTTGTGAGACTGCAGCCATCTTGAAGCATAAGCTCTCTCAAGCACCTCTTCTGCCTTTCTTATT
GAAATGTCTCAAGATGGACACTGATGTTGTGGTCTCACAACCTGGTGTCTTGGTGTGATCACCATGCTC
CCGATGATCCCGCAGTCAGGGAAGCAGCACCTTCTCGACTTCTTTGACATCTTTGGCCGTCTCTCGTCAT
GGTGCCTGAAGAAACCAGGCCATGTGACAGAAGTGTACCTGGTCCATCTTCATGCCAGTGTTCATGCCCT
CTTTCACCGCCTTATGGGATGTACCCATGTAACCTCGTCTCCTTCTGCGCTCTCACTACAGTATGAAG
GAAAACGTGGAGACTTTTGAAGAAGTGGTCAAGCCAATGATGGAGCATGTGCGAATTCACCCGGAATTAG
TGACTGGATCCAAGGACCATGAACTGGACCCTCGAAGGTGAAGACATTAGAAACTCATGATGTTGTAAT
AGAGTGTGCCAAAATCTCTCTGGACCCTACAGAAGCCTCGTATGAAGATGGCTATTCTGTGTCACACCAG
CTCTCTGCTTGCCTTACCCTTACCGTTCAGCTGATGTCACCACCAGCCCTTATGTGGACACACAGAATAGCT
ATGGGGTTTCTACTTCCACCCCTTCTCCAGCTCTCGGCTGATGTTGTTGAGTCCACCTGGGCAGCTACC
TCAGAGTTTGAAGTCCCATCAACACGGCTGTTACCTGAGCCGCTGCAAGCTAGTCTCTGGAGCCCATCT
GCGGTCTGTGGTATGACCACTCCTCCTACGCTCTCCTGAAATGTCCAGCTGATTTGTACATCCGTATA
GTAAGCCTTTGGTACCCTGGTGGAAAAGGAACCTCCTCAGGAACCCAGCGACCTCTCCTCCTCCAGC
CCCACCTTGTCCCAAGATGACTGTGTGATGGTTCAGCAGCCAGGCCCTCAGCCACAGCCCCAGGAAG
GAAGAAAGAGCAGATTCTCAAGGCCTTACCTTACAGACAGTCAAACGACCGAGGATTAGAGGATCCAC
CTGGAAGCAAAGTTCGGTACTCTGAGGAATCTACCTGATTTCTAGGTGATCTGGCTTCTGAGGAAGA
CAGTATCGAGAAAGATAAGGAAGAAGCTGCAATATCTAAAGAGCTTTCTGAGATCACTACTGCAGAGGCG
GATCCTGTAGTTCCTCGAGGGGGCTTACTCTCCCTTACCGAGACAGTCTCTCTGGCTCTCAGCGGA



AGACTCATTTCGGCAGCCTCTGGGACTCAGGGCTCCAGCGTGAACCCTGAGCCTTTGCACTCCTCCCTGGA
 CAAACATGGGCCTGACACACAAAGCAAGCCTTTACTCCCATAGACCCACCCTCTGGCAGTGCTGATGTC
 AGTCCCCTGGGGACAGGGATCGCCAGACTTCTCTGGAGACCAGTATCCTCACTCCCAGCCCTTGCAAAA
 TCCCACCTCAGAGGGGAGTGAGCTTTGGAAGTGGGCAGCTTCCCCATATGATCATCTCTTTGAGGTGGC
 CTTGCCAAAGACTGCCTGTCACCTTTGTGAGCAAGAAGACTGAGGAGCTGTTGAAGAAAGTAAAGGAAAC
 CCTGAGGAAGACTGTGTGCCCTACCTCCCCAATGGAAGTACTGGACAGACTGATAGAGCAGGGAGCAG
 GTGCGCACAGCAAGGAGCTGAGCAGGTTGCCCTGCCAGCAAGTCTGTTGACTGGACCCACTTTGGAGG
 CTCTCCTCCCTCAGATGAGCTCCGGACCCTCCGAGACCAGTTGCTTTTACTGCACAATCAGCTGCTGTAC
 GAGCGCTTCAAGCGGCAGCAGCATGCACTCAGGAACAGAAGGCTCCTGCGCAAGGTGATCCGAGCAGCGG
 CTCTGGAGGAACACAATGCAGCAATGAAAGATCAGTTGAAGTTACAAGAGAAGGACATACAGATGTGGAA
 GGTGAGTCTGCAGAAAGAACAAGCCGATACAGTCAGCTTTCAGGAACAACGTGACACCATGGTGACCCAA
 CTGCATAGCCAGATCAGACAGCTACAGCATGACCGAGAAGAATTCTACAACCAGAGTCAGGAGTTACAGA
 CAAAGCTGGAGGACTGCAGAAACATGATTGCGGAGCTTCGGGTGGAGCTGAAGAAGGCTAACAACAAGGT
 GTGCCACACTGAGCTGCTGCTCAGCCAGGTCTCTCAGAAGCTCTCAACAGTGAGTCAGTGCAGCAGCAG
 ATGGAGTTCTTGAATAGGCAGCTCCTGGTCTCGGGGAGGTCAATGAGCTGTACCTGGAGCAGCTGCAGA
 GCAAGCATCCTGACACCACCAAGGAAGTAGAAATGATGAAAACATCATCGGAAAGAGCTAGAGAAAAA
 CAGAAGCCACCTTCTCCAGCAGAACCAAGGTTGGACGCCTCACAGAGGCGAGTTTTGAACTGGAGTCT
 TTCTGGCCAAGAAAGACCACCTTCTCCTAGAACAAGAAATATCTTGAGGATGTCAAGAGCCAGGCGA
 GTGGACAGCTGCTGGCTGCAGAGAGCAGGTATGAGGCTCAGAGAAAGATCACCCGGGTGTTGAACTGGA
 GATCCTAGACTTGTATGGCAGGTTGAAAAAGATGGCCGCTACGGAAACTAGAAGAGGACAGAGCAGAG
 GCAGCAGAGGCAGCAGAAGAGAGGCTTACTGTTGTAGTGATGGATGCACAGATTCTTGGTAGGACATA
 ATGAAGAGGCTTCTGGTCACAATGGTGAGACCAGGACCTCCAGACCTGGTGGCACCCGGCCAGCTGTGG
 AGGTAGAGTCACTGGAGGCAGCAGCAGCAGCAGTGTGAGCTTTCCACTCCAGAGAAACCCCGAGCCAG
 AGGTTTCAGCAGCCGGTGGGAACCTGCCCTGGGCGAGCCCTCCAGCAGCATCCCCACCACTGTTGGCTCAC
 TTTCCAGTTCCAAAAGCTTCTGGGCATGAAGGCCGGGAGCTGTTCCGTAATAAGAGCGAGAGCCAGTG
 TGATGAGGACAGCGTGACCATGAGTAGCAGCAGCCTTTCTGAGACCCTGAAGACAGAAGTGGGCAAGGAC
 TCGGGCACAGAAAACAAGACTTCCCTGAGTCTAGATGCCCCACACCCATCTTCCCAAACTCAGACAATG
 TGGGGCAGCTCCACATCATGGACTACAATGAGACTCATCTGAACACAGCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

Sgfl-Mlul

ACCN:

NM_022887

Insert Size:

3483 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: [NM_022887.4](#), [NP_075025.2](#)

RefSeq Size: 7700 bp

RefSeq ORF: 3483 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 (2) differs in the 5' UTR and uses an alternate in-frame splice site in the 5' coding region, compared to variant 1. It encodes isoform 2, which is shorter than isoform 1.