

## Product datasheet for MC213187

### Tsku (NM\_001168540) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Tsku (NM_001168540) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Tsku
Synonyms:	9530051K01Rik; E2ig4; Lrrc54; Tsk
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC213187 representing NM_001168540 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**

ATGCTGTGCTCTCTGTTCTGCTGCTGCTGGCCGTGGGCAGAGTGCAGACGACTCGGCCGTGTTCCCTG  
GCTGCCAGTGTGAAGAAGAGACATTGGCCTCTTTGACAGTTTCAGCCTGATCCGTGTGGACTGCAGCAG  
CCTGGGCCCCACATTGTGCTGTGCCATCCCTTTGGATACAGCCACCTGGACCTGTCTTCAACCGG  
CTAGAAACCGTGAATGAGTCAGTCTTGGCAGGGCCAGGCTATACCACACTGGCTGGCCTGGATCTCAGTT  
ACAACCTGCTCACCAGCATCATGCCCTCTGCCTTCTCCGACTGCGCTACCTGGAGTCACTTGACCTCAG  
CCACAATGGCCTGGCAGCCTGCCGGCAGAGATTTTACCAGCTCCCCCTTGAGTGACATCAATCTGAGC  
CATAACCGACTACGAGAGGTCTCGATATCTGCCTTACCACCCACAGCCAGGGCCGGGCACTGCACGTGG  
ACCTATCCCAATCTTATCCATCGCCTGCTTCCCCATCCAGCCCGGGCCAGCCTGCCTGCACCTACCAT  
TCAGAGCCTGAACCTGTCTGGAACCGATTCCGAGCTGTGCCGATCTCCGAGACCTACCCTGCGTTAC  
CTGAGCCTGGATGGGAACCTCTGGCTACCATCAACCCAGATGCCTTCATGGGGCTGGCAGGCCTCACCC  
ACCTGTCACTGGCCAGCCTGCAGGGCATCCTCCATCTACCACCCACGGCTTCCGGGAGCTCCAGGCCT  
TCAGGTCTGGACTTGTGAGCAACCCCAAGCTCAAGTGGCAGGAGCTGAGGTGTTTTCAGGCCTGGGT  
TTGCTGCAGGAAGTACCTGTGAGGCTCCAGCTTGGTGCCCTGCCTGAGATGCTGCTGCATCACCTCC  
CTGCTTTACAAAGTGTGAGCGTAGGCCAGGATGTGCAAGTCCCGGCCTGGTGCGGGAGGGCGCCTACCA  
CCGGCAGCCTGGCTCCAGCCCTAAGGTAGTCTACACTGTGGAGACACCCAGGAATCTGCTGCCAGGGGC  
CCAGACATTTT**GTGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI



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<b>ACCN:</b>	NM_001168540
<b>Insert Size:</b>	1065 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<u>NM_001168540.1, NP_001162012.1</u>
<b>RefSeq Size:</b>	2620 bp
<b>RefSeq ORF:</b>	1065 bp
<b>Locus ID:</b>	244152
<b>UniProt ID:</b>	<u>Q8CBR6</u>
<b>Cytogenetics:</b>	7 E1

**Gene Summary:**

Contributes to various developmental events and other processes such as wound healing and cholesterol homeostasis through its interactions with multiple signaling pathways (PubMed:21856951, PubMed:22995554, PubMed:25159578, PubMed:31391339). Wnt signaling inhibitor which competes with WNT2B for binding to Wnt receptor FZD4 and represses WNT2B-dependent development of the peripheral eye (PubMed:21856951). Plays a role in regulating the hair cycle by controlling TGFB1 signaling (PubMed:22995554). Required for the development of the anterior commissure in the brain by inhibiting neurite outgrowth (PubMed:21055390, PubMed:23206892). Essential for terminal differentiation of hippocampal neural stem cells (PubMed:31983064). Plays a role in regulating bone elongation and bone mass by modulating growth plate chondrocyte function and overall body size (PubMed:30271858). Required for development of the inner ear through its involvement in stereocilia formation in inner hair cells (PubMed:32127020). Facilitates wound healing by inhibiting secretion of TGFB1 from macrophages which prevents myofibroblast differentiation, maintaining inflammatory cell quiescence (PubMed:25159578). Plays a role in cholesterol homeostasis by reducing circulating high-density lipoprotein cholesterol, lowering cholesterol efflux capacity and decreasing cholesterol-to-bile acid conversion in the liver (PubMed:31391339). In one study, shown to negatively regulate sympathetic innervation in brown fat, leading to reduced energy expenditure (PubMed:31535079). In another study, shown not to affect brown fat thermogenic capacity, body weight gain or glucose homeostasis (PubMed:31767170).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) differs in the 5' UTR compared to variant 1. All four variants encode the same protein. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.