

## Product datasheet for **MG217070**

### Tsku (NM\_001168540) Mouse Tagged ORF Clone

#### Product data:

|                           |                                                                                |
|---------------------------|--------------------------------------------------------------------------------|
| Product Type:             | Expression Plasmids                                                            |
| Product Name:             | Tsku (NM_001168540) Mouse Tagged ORF Clone                                     |
| Tag:                      | TurboGFP                                                                       |
| Symbol:                   | Tsku                                                                           |
| Synonyms:                 | 9530051K01Rik; E2ig4; Lrrc54; Tsk                                              |
| Mammalian Cell Selection: | Neomycin                                                                       |
| Vector:                   | pCMV6-AC-GFP (PS100010)                                                        |
| E. coli Selection:        | Ampicillin (100 ug/mL)                                                         |
| ORF Nucleotide Sequence:  | >MG217070 representing NM_001168540<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTGTGAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**

ATGCTGTGCTCTCTGTTCTGCTGCTGCTGGCCGTGGGCAGAGTGCAGACGACTCGGCCGTGTTCCCTG  
GCTGCCAGTGTGAAGAAGAGACATTGGCCTCTTTGACAGTTTCAGCCTGATCCGTGTGGACTGCAGCAG  
CCTGGGCCCCACATTGTGCCTGTGCCATCCCTTTGGATACAGCCACCTGGACCTGTCTTCAACCGG  
CTAGAAACCGTGAATGAGTCAGTCTTGGCAGGGCCAGGCTATACCACACTGGCTGGCCTGGATCTCAGTT  
ACAACCTGCTCACCAGCATCATGCCCTCTGCCTTCTCCGACTGCGCTACCTGGAGTCACTTGACCTCAG  
CCACAATGGCCTGGCAGCCCTGCCGGCAGAGATTTTCACCAGCTCCCCCTTGAGTGACATCAATCTGAGC  
CATAACCGACTACGAGAGGTCTCGATATCTGCCTTCAACCCACAGCCAGGGCCGGGCACTGCACGTGG  
ACCTATCCCAATCTTATCCATCGCCTGCTTCCCCATCCAGCCCGGGCCAGCCTGCCTGCACCTACCAT  
TCAGAGCCTGAACCTGTCTGGAACCGATTCCGAGCTGTGCCGATCTCCGAGACCTACCCTGCCTTAC  
CTGAGCCTGGATGGGAACCTCTGGCTACCATCAACCCAGATGCCTTCATGGGGCTGGCAGGCCTCACCC  
ACCTGTCACTGGCCAGCCTGCAGGGCATCCTCCATCTACCACCCACGGCTTCCGGGAGCTCCAGGCCT  
TCAGGTCTGGACTTGTCAAGCAACCCCAAGCTCAAGTGGCAGGAGCTGAGGTGTTTTCAGGCCTGGGT  
TTGCTGCAGGAAGTAGACCTGTCAAGCTCCAGCTTGGTGGCCCTGCCTGAGATGCTGCTGCATCACCTCC  
CTGCTTTACAAAGTGTACGCGTAGGCCAGGATGTGCAAGTCCCGGCCTGGTGCGGGAGGGCGCCTACCA  
CCGGCAGCCTGGCTCCAGCCCTAAGGTAGTCTACACTGTGGAGACACCCAGGAATCTGCTGCCAGGGGC  
CCAGACATTTTG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG217070 representing NM\_001168540  
 Red=Cloning site Green=Tags(s)

MLCSLFLLLLAVGRVQTTRPCFPGCQCEETFGLFDSFSLIRVDCSSLGPHIVPVIPLDTAHLDLSSNR  
 LETVNESVLAPGYTTLAGLDLSYNLLTSIMPFAFSLRYLESGLSHNLAALPAEFTSSPLSDINLS  
 HNRLREVSISAFTHSQGRALHVDLSHNLHRLPHPARASLPAPTIQSLNLSWNRFRAYPDLRDLPLRY  
 LSLDGNPLATINPDAMGLAGLTHLSLASLQGILHLPHPGFRELPGQLVLDLSGNPKLKWAGAEVFSGLG  
 LLQELDLSGSSLVPLPEMLLHLLPALQSVSVGQDVQCRRLVREGAYHRQPGSSPKVVLHCGDTQESAARG  
 PDIL

TRTRPLE – GFP Tag – V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001168540

**ORF Size:** 1062 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** NM\_001168540.1, NP\_001162012.1

**RefSeq Size:** 2620 bp

**RefSeq ORF:** 1065 bp

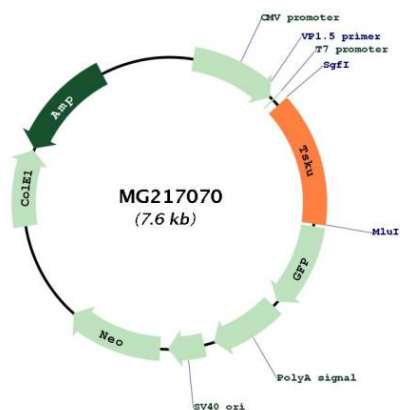
**Locus ID:** 244152

**UniProt ID:** Q8CBR6

**Cytogenetics:** 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]

## Product images:



Circular map for MG217070