

## Product datasheet for **MG207758**

### Sufu (NM\_001025391) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sufu (NM_001025391) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Sufu
Synonyms:	Su(fu)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG207758 representing NM\_001025391  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCGGAGCTGCGGCCCTAGCGTCGCCCCCGTCCCGCCGCGCCCGGCCCTCTGGCCCTAGTGCCCTC  
 CGGCCTTTGCTTCACTCTTTCCCGGGACTGCACGCCATCTACGGAGAGTGTGCGCCGCTTACCTGA  
 CCAGCCGAACCCGCTCCAGGTTACCGCTATCGTCAAGTACTGGTTGGTGGTCCGGACCCCTTGACTAT  
 GTTAGCATGTACAGGAACATGGGGAGTCCCTTCCCAACATCCCTGAGCACTGGCACTACATCAGCTTTG  
 GCCTGAGTGATCTCTATGGTGACAACAGAGTCCATGAGTTACAGGAACAGACGGACCAAGTGGATTTGG  
 CTTTGAGTTGACGTTTCGTCTGAAGAGAGAAAAGTGGGGAGTCTGCCCCACCAACATGGCCAGCAGAGCTG  
 ATGCAGGGCCTAGCCGATATGTCTCCAGTCAGAGAACACCTTCTGTAGCGGGGACCATGTGTCTTGGC  
 ACAGCCCTTTGGATAACAGTGAGTCAAGAATTCAGCACATGCTGCTGACGGAGGACCCACAGATGCAGCC  
 TGTGCGGACACCCCTTTGGGTAGTGACTTCTCCAGATTGTTGGTGTCTGCACTGAGGAGTTACATTCA  
 GCCCAACAGTGGAACGGGCAGGGCATCCTGGAACACTACGGACAGTGCCCATTCGCTGGCGGTCCCTGGC  
 TGATAACTGACATGCGCGGGGAGAAAACATATTTGAGATCGATCCGCACCTGCAAGAGAGAGTTGACAA  
 AGGCATTGAGACAGACGGTTCTAACCTGAGCGCGTCACTGCCAAGTGTGCCTGGGATGACCTCAGCCGG  
 CCTCCGGAGGATGAAGAGGATAGCCGGAGCATCTGCCTCGGCACACAGCCTCGGAGGCTGTCTGGCAAAG  
 ACACAGAGCAGATCCGGGAGACCCTGAGGCGGGGACTGGAGATTAACAGCAAACCTGTCTTCCACCAAT  
 CAATTCTCAGCGACAGAACGGCCTCACCCACGACAGGGCTCCGAGCCGCAAGGACAGTTTGGGCAGCGAC  
 AGCTCCACGGCCATCATCCCCACGAGCTGATCCGCACACGGCAGCTCGAGAGCGTGCATCTAAAATTTA  
 ACCAAGAGTCGGGAGCCCTCATCCCTCTCTGCCTAAGGGGCGAGACTCCTACATGGCCGGCCACCTA  
 CAAGAGTATCACAGGCGACATGGCCATCACGTTTGTGTCCACGGGAGTGAAGGCCCTTTGCCACTGAG  
 GAACACCCGTATGCAGCTCACGGACCCTGGTTACAAATTCGTTGACAGAAGAGTTTGTAGAGAAGATGT  
 TGGAGGACTTAGAAGATCTAACCTCTCCAGAGGAATTTAACTTCCCAAAGAGTACAGCTGGCCTGAGAA  
 GAAACTCAAAGTGCATTCTCCCGACGTGGTGTTCGACAGTCCACTGCAC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG207758 representing NM\_001025391  
 Red=Cloning site Green=Tags(s)

MAELRPSVAPGPAAPPASGPSAPPASLFPPLHAIYGECCRLLYDQPNPLQVTAIVKYWLGPDPLDY  
 VSMYRNMGSPSANIPEHWHYISFGLSDLYDNRVHEFTGTDGSPSGFELTFRLKRETGESAPPTWPAEL  
 MQGLARYVVFQSENTFCSGDHVSWHSPLDNSESRIQHMLLTEDPQMOPVTRPFQVVTFLQIVGVCTEELHS  
 AQQWNGQIPELLRTVPIAGGPWLITDMRRGETIFEIDPHLQERVDKGIETDGSNL SGVSAKCAWDDL SR  
 PPEDEEDSRISICLGTQPRRLSGKDEQIRETLRRGLEINSKPVLPPINSQRQNGLTHDRAPSRKDSLGS  
 SSTAIIIPHELIRTRQLESVHLKFNQESGALIPLCLRGRLLHGRHFTYKSIITGDMAITFVSTGVGAFATE  
 EHPYAAHGPWLQILLTEEFVEKMLEDLTSPEEFKLPKEYSWPEKLLKVSILPDVVFDSPLH

**TRTRPLE** - GFP Tag - V

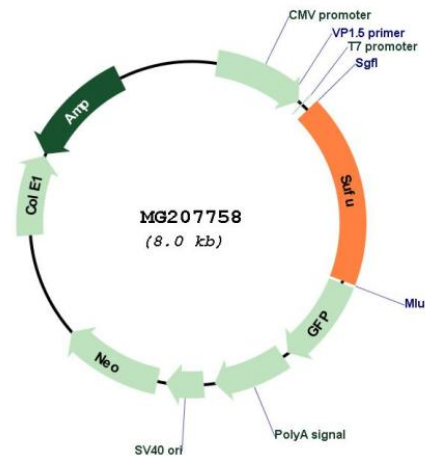
**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_001025391

ORF Size: 1452 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.

**RefSeq:** [NM\\_001025391.2](#), [NP\\_001020562.1](#)

**RefSeq Size:** 2356 bp

**RefSeq ORF:** 1455 bp

**Locus ID:** 24069

**UniProt ID:** [Q9Z0P7](#)

**Cytogenetics:** 19 38.85 cM

**Gene Summary:** Negative regulator in the hedgehog/smoothened signaling pathway (PubMed:16155214, PubMed:16459298). Down-regulates GLI1-mediated transactivation of target genes (PubMed:11960000). Part of a corepressor complex that acts on DNA-bound GLI1 (PubMed:11960000). May also act by linking GLI1 to BTRC and thereby targeting GLI1 to degradation by the proteasome (By similarity). Sequesters GLI1, GLI2 and GLI3 in the cytoplasm, this effect is overcome by binding of STK36 to both SUFU and a GLI protein (PubMed:10531011, PubMed:16459298). Negative regulator of beta-catenin signaling (PubMed:11477086). Regulates the formation of either the repressor form (GLI3R) or the activator form (GLI3A) of the full-length form of GLI3 (GLI3FL) (PubMed:10531011, PubMed:20360384). GLI3FL is complexed with SUFU in the cytoplasm and is maintained in a neutral state (PubMed:10531011, PubMed:20360384). Without the Hh signal, the SUFU-GLI3 complex is recruited to cilia, leading to the efficient processing of GLI3FL into GLI3R (PubMed:10531011, PubMed:20360384). When Hh signaling is initiated, SUFU dissociates from GLI3FL and the latter translocates to the nucleus, where it is phosphorylated, destabilized, and converted to a transcriptional activator (GLI3A) (PubMed:10531011, PubMed:20360384). Required for normal embryonic development (PubMed:16155214, PubMed:16459298). Required for the proper formation of hair follicles and the control of epidermal differentiation (PubMed:16155214, PubMed:16459298, PubMed:23034632). [UniProtKB/Swiss-Prot Function]