

## Product datasheet for **MC216162**

### **Shtn1 (NM\_175172) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Shtn1 (NM_175172) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Shtn1
Synonyms:	4930506M07Rik; Kiaa1598; mKIAA1598; Shootin1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC216162 representing NM\_175172  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAACAGCTCGGACGAGGAGAAGCAGCTGCAGCTCATCACCAGCTTGAAGGAGCAAGCCATTGGCGAAT  
 ATGAAGACCTTCGAGCAGAGAACCAGAAAACAAAGGAGAAGTGTGACAAAATTAGGCAAGAACGAGATGA  
 AGCTGTTAAAAAACTGGAAGAGTTTCAGAAAATTTACATATGGTTATAGAGGAGGTGAATTTTCATGCAG  
 AACCATCTTGAAATAGAGAAGACATGTCGAGAGAGCGCTGAAGCCTTGCGCAGAAAAGCTAAATAAAGAAA  
 ATAAAACACTGAAAAGAATCAGCATGCTATACATGGCCAAACTGGGGCCAGACGTAATTACAGAGGAGAT  
 AAACATTGATGATGATGACCCAGCCACCGACACAGATGCTGCGGCTGAGACCTGTGTGTCTGTTCAGTGT  
 CAGAAGCAAATCAAAGAACTTCGAGATCAAATTTGTCTGTTTCAGGAAGAAAAGAAGGTGTAGCCATCG  
 AGCTGGAAAACCTCAAGAGCAAACCTCGGGGAGGTGATGGAGGAGTAAATAAAGTTAAGCAAGAAAAAGC  
 TGTTTTAAATTCAGAAGTCTTTCAGCAGAGGAAAGTCTTAGAAAAATGCAACAGAGTGTCCATGTTGGCT  
 GTTGAAGAGTATGAGGAACTGCAAGTGAACCTGGAACCTGGAGAAGGACCTTCGCAAGAAAAGCAGAGTCTT  
 TTGCACAAGAGATGTTTCATTGAACAAAACAACTGAAGAGACAAAAGCCACCTTCTGCTGCAGAGCTCCCT  
 TCCTGACCAGCAGCTTTTGAAAGCTTTAGACGAAAACGAAAACCTTATCCAGCAGCTTGAAGAAGAGAGG  
 ATCCAGCATCAGAAAAAGGTCAAAGAGCTGGAGGAGCGGCTGGAGAATGAAGCACTTCACAAAGAGATCC  
 ATAACCTCAGACAACAGCTGGAGCTTCTGGAAGACGACAAGAGGGAGCTAGAGCAGAAAATACCAGAGCTC  
 GGAGGAGAAGGCCCGAACCTGAAGCATTCACTGGATGAACCTTCAGAAGCGAGTGAACCACTGTGAGAT  
 TCGGTACCTCCCCGCCCTCTCTCTCCACCTCTCCCCCTCCACCTCCAATCCAATCCGGTCCCTCA  
 TGCTATGATCCGGAAGCGATCTCACCCAGTGGCAATAGTGCTAAGAAAAGAAAAGACAACCTCAGCCAGA  
 GACAGCTGAGGAAGTACAGACCTGAAGAGGCAAGCAGTGGAAAGAGATGATGGACAGAATTAAGAAGGGA  
 GTTCATCTTAGACCGTTAACCAGACAGCCAGACCCAAGGCAAAGCCAGACTCTCTCAAGGGCTCAGAAA  
 GTGCGGTGGATGAGCTGAAGGGAATCCTGGCCTCCAGTAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

**ACCN:** NM\_175172

**Insert Size:** 1371 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\\_175172.4](#), [NP\\_780381.1](#)

RefSeq Size: 3767 bp

RefSeq ORF: 1371 bp

Locus ID: 71653

UniProt ID: [Q8K2Q9](#)

Cytogenetics: 19 D2- D3

**Gene Summary:** Involved in the generation of internal asymmetric signals required for neuronal polarization and neurite outgrowth (PubMed:23864681). Mediates netrin-1-induced F-actin-substrate coupling or 'clutch engagement' within the axon growth cone through activation of CDC42, RAC1 and PAK1-dependent signaling pathway, thereby converting the F-actin retrograde flow into traction forces, concomitantly with filopodium extension and axon outgrowth. Plays a role in cytoskeletal organization by regulating the subcellular localization of phosphoinositide 3-kinase (PI3K) activity at the axonal growth cone. Plays also a role in regenerative neurite outgrowth (By similarity). In the developing cortex, cooperates with KIF20B to promote both the transition from the multipolar to the bipolar stage and the radial migration of cortical neurons from the ventricular zone toward the superficial layer of the neocortex (PubMed:23864681). Involved in the accumulation of phosphatidylinositol 3,4,5-trisphosphate (PIP3) in the growth cone of primary hippocampal neurons (PubMed:23864681). [UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) differs in the 3' UTR and has multiple coding region differences, compared to variant 1, one of which results in a frameshift. The resulting isoform (2, also known as shootin 1a) is shorter with a distinct C-terminus compared to isoform 1.

Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.