

## Product datasheet for MC224879

### Shank3 (NM\_021423) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Shank3 (NM\_021423) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Shank3  
**Synonyms:** Al841104; Shank3b; SHANK3c-3; SHANK3c-4  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC224879 representing NM\_021423  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGC**C

ATGGACGGCCCCGGGCCAGCGCCGTGGTCGTGCGCGTCGGCATCCCGGACCTGCAACAAACGAAGTGCC  
 TGGCTCTGGACCAACCGCGCCCGTGTGGGCCCAAGCAGCGTGTGCTCTGCGCCCTCAATCATAGCCT  
 TCAAGACGCGCTCAACTACGGGCTATCCAGCCTCCCTCCCGGGTTCGCGCCGGCAAGTTCCTGGATGAA  
 GAGCGGCTCTTACAGGACTACCCGCCTAACCTGGACACGCCCTGCCCTATCTGGAGTTCGATACAAGC  
 GGAGAGTTTATGCCAGAACCTCATAGATGACAAGCAGTTTGAAGCTACACACAAAGGCAAACCTGAA  
 GAAGTTCATGGACTATGTCCAGCTACACAGCACAGATAAGGTGGCCCGCCTGCTGGACAAGGGGCTGGAC  
 CCCAATTTCCATGACCCTGACTCAGGAGAGTGCCTCTGAGCCTTGGCGCACAGTTGGACAACGCCACTG  
 ACCTCCTGAAGTTTCTCCGCAACGGCGGTGCTCATCTGGACTTCCGGACCCGAGATGGGCTGACAGCCGT  
 CCACTGTGCTACCCGCCAGCGGAACGCAGGGGCATTGACGACCCTGCTGGACCTGGGGGCTTCGCTGAC  
 TACAAGGACAGCCGCGCCTGACGCCCTGTACCATAGTGCCCTAGGGGGCGGGGATGCCCTCTGTTGCG  
 AGCTGCTTCTCCATGATCATGCACAGCTGGGGACCACTGATGAGAATGGTTGGCAAGAGATCCATCAGGC  
 CTGTGCTTTGGACACGTGCAGCACCTGGAGCACCTTTTGTCTATGGGGCCAACATGGGTGCTCAGAAT  
 GCCTCGGAAACACAGCCCTGCACATCTGTGCCCTCTACAACAGGAGAGTTGCGCGCGCTCCTGCTTT  
 TCCGTGGTGCCAAACAGGACGTCCGCAATTACAACAGCCAGACAGCCTTCCAGGTGGCCATTATTGCAGG  
 GAACCTTGAGCTTGGCGAGGTAATCAAGACCCACAAAGACTCCGATGTCGTACCATTCAGGGAAACCCCC  
 AGCTATGCAAAGCGACGGCGTCTGGCTGGCCGAGTGGCTGGCATCCCCACGGCCCTTACAGCGCTCAG  
 CCAGTGATATCAACCTGAAAGGTGATCAGCCCGCAGCTTCTCCAGGGCCACTCTCCGAAGCCTCCCTCA  
 TCAACTCTTGCTCCAGAGGCTTCAGGAGGAGAAAGACCGTGACAGGGATGGTGAAGTGGAGAATGACATC  
 AGCGGCCCTCAGCAGGCAGGGTGGCCACAACAAGATCAGCCCGAGTGGCCCGCGGATCCGGCCCCG  
 CGCCCGCCCCCGCCCGGCTCTCCCGGCCCCCGCGCCGCCCCGGGGCCCGAAGCGGAAACTTTA  
 CAGTGCCGTCCCCGGCCGAAGTTCATCGCTGTGAAGGCGCACAGCCCGAGGGCGAGGGCGAGATCCCG  
 CTGACCCGCGGAGGCCGTGAAGGTGCTCAGCATTGGGGAGGGCGGTTTCTGGGAGGGAACCGTGAAGG



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GCCGAACAGGCTGGTTCCAGCTGACTGTGTGGAAGAAGTGCAGATGCGACAGTATGACACCCGGCATGA  
AACCAGAGAGGACCGGACGAAGCGTCTCTCCGCCACTACACTGTGGGTTCTATGACAGCCTCACTTCA  
CACAGCGATTATGTATCGATGATAAAGGTGGCTATCCTGCAGAAAAGGGACCATGAGGGGTTTGGCTTG  
TTCTCCGGGAGCCAAAGCAGAGACCCCATGAGGAGTTTACACCCACACCTGCCTTCCTGCACTCCA  
ATACCTTGAGTCTGTAGATGTGGAAGGTGTGGCCTGGAGGGCTGGACTTCGAAGTGGGGACTTCCTCATT  
GAGGTGAACGGAGTGAATGTCGTGAAGGTTGGACACAAGCAAGTGGTGGGTCTCATCCGTGAGGTGGCA  
ACCGCTGGTCATGAAGGTTGTGTCTGTGACCAGGAAACCCAGGAGGATGGTGTCTGGCGCAGAGCCCC  
ACCACCCCAAAGAGGGCTCCAGACACCGCTGACCCTGCGGTCCAAGTCCATGACGGCTGAGCTCGAG  
GAACTTCTTCCATTGAGAGAAGAAAAGGGGAGAAGTTGGATGAGATCCTGGCAGTTGCCGCGGAGCCGA  
CACTGAGGCGGACATTGCAGATGCTGACTCGAGGGCGGCCACTGTCAAGCAGCGGCCACCAGCCGGAG  
GATCACCCCTGCTGAGATCAGCTCATTGTTTGGAGCCAGGGCCTCCAGGCCAGAGAAGCTGCCGGGC  
TCTCTGCGGAAGGGATTCCACGGACCAAACTGTAGGGGAGGATGAGAAGCTGGCATCCCTACTGGAAG  
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GACCGCCCGCCACCCCAACCCGCGCCCTACTACTTGCCTCCGGGCCACCCCACTTCTCACCGCCG  
CCACCACCGGGCGGGCCTATGACACTGTGCGTCCAGCTTCAAACCAGGCCTGGAGGCTCGTCTGGGTG  
CGGGGGCGCGCCCTGTATGATCCGAGCAGCCTCTGGGCCCGCTGCCCTACCTGAGGCTCAGAAGCG  
TGCGCGCTCCATGATCATACTGCAGGACTCTGCGCCAGAAGTGGGTGATGTCGCCCGGCCTGCGCCTGCC  
GCCACACCGCCTGAGCGCCCAAGCGCCGCTCGGCCGTGAGGCCCTGATAGTCCCTATGCCAACCCTGG  
GCGCCTCAGTGCCAGCCTCTTCGCTCCGTGCAAAACCAGCGCCGCAAGAGCCCGCTGGTGAAGCAGCT  
TCAGGTGGAGGAGCCTCAGGAGCGCGGGCCCTGGCCGTGGGTAGCCCGGACCAGTGGGCGGAAGCTTT  
GCACGAGAACCCTCTCCGACGCACCGCGGGCCCGCCAGGCAGCCTTGACTACAGCTCTGGAGAAGGCC  
TAGGCCCTACCTTCGGCGGCCCTAGCCCTGGCCAGTCAAGGAGCGCGCCTGGAGGAGCGACCCGCTTC  
CACTGTGTTCTCTCTGTGGGTGCCACTGAGGGCAGCCCTCCAGCGGGATCTGCCATCCCTACAACCC  
TCCCGCTCCATTGATGAGCGCCTCTGGGGACAGGCGCCACCCTGCGCCGATTTGCTACTCCCTCCC  
CTGTCTCTGCTCTGAAGCCATTGGTGGTCCAGCCTTGGGCCCTCAGGCTCCACCTTCATCCACCC  
TCTCACTGGCAAACCCTTGATCCTAGCTCACCTTAGCTTCTGCTCTGGCTGCCCGGGAGCGGGCTCTG  
GCCTCGAAACACCTTCCCGTCCCCACACCTGTGCACAGCCCGATGCTGACCGCCCTGGACCCCTCT  
TTGTGGATGTGCAAAACCCGAGACTCTGAGAGAGGACCGTTGGCTTCCCAGCCTTCTCCCTCGGAGTCC  
AGCGTGGATTCCAGTGCCTGCTCGAGAGAGGCAGAGAAGCCCTCGGAAGAGCGGAAGTACCAGAG  
GACAAGAAGTCCATGATCCTCAGCGTCTTGACACGTCCTTGCAACGGCCAGCTGGCCTCATTGTTGTC  
ATGCCACCAGCAATGGCAGGAGCCAGCAGGCTGGGGCTGAAGAGGAGCGCCCGGTACTCCGGAGCT  
GGCCCCAGCCCCATGCAGGCAGCAGCTGTGGCAGAGCCATGCCAAGCCCGGGCCAGCCCCCTGGC  
AGCATCCAGCAGATCCCGGCCAGGTCAAGGCAGCTCAGAGGAGGAGCCAGAGCTGGTATTGCTGTGA  
ACCTGCCACCTGCTCAGCTGTCTCCAGCGATGAGGAGACCAGAGAGGAGCTGGCCCGCATAGGGCTAGT  
GCCACCCCTGAAGAGTTTGCAATGGGATCCTGCTGACCACCCCGCCCCAGGGCCGGGCCCTTGCC  
ACCACGGTACCAGCCCGGCTCAGGGAAGCCAGCAGCGAGCTGCCCTGCCCCTGAGTCTGCAGCTG  
ACTCTGGAGTAGAGGAGGCTGACACTCGAAGCTCCAGTGACCCCACTGGAGACCACAAGCACCATTTC  
CACAGTGTCCAGCATGTCCACCTGAGCTCGGAGAGTGGGAACTCACGGACACCACACCTCTTTGCC  
GATGGACACACTTTTCTACTCGAGAAGCCACAGTGCCTCCCAAGCCCAAGCTCAAGTCCCGCTGGGGA  
AGGGGCCGTTGACCTTACGGGACCCGCTGCTGAAGCAATCCTCGGACAGTGAAGTCAAGTCCCGCAGCA  
CCATGCTGCCTTACTGGGTTGGCTTCTGCTGTGGGCCCGCCCGCCTCGCTACCTCTTCCAGAGAAGG  
TCCAAGCTGTGGGGGACCCCGTGGAGAGTGGGGGCTCCCTGGGCTGAAGTGAACAAACCACTGTGA  
TCAGTGAAGTCAAGTCCCGTCTGCAGCAGTGAATAAAGACACACGCTCCTTGGGGGAGGAACAGTTGG  
TGGCCTGGGACGCTGCTGGACCCTGCTAAGAAGTCAACATTGCAGCAGCTCGGCTCTTCAAGCAGCTC  
GGTGAAGTGAACATCTCAGCGCAGCGAGCCCGGGGGCCCGGGCGGAGGGGCTCTACTCGGTGC  
GGCCAGCGCCCGGTACCCCGTGGCAGACGAGCCCGAGCCAGTGAACCCGCATCGTGGAGCGGGT  
GGAGGGCTGGGGCGGGCGTGGAGGCGGGGGCGCCCTTGGCCTCAGCCTCCACCATCTCAAG  
TCGTCCAGCCTTCCATCCCGCACGAACCAAGGAAGTGGCTTCTGGTGGTGAAGTGTGAGTGGCGCA  
GCCGCTCCCTCACCATCTCCGCTGCCCTCGCCTTCTCCCGCTCTGGCCCAAGTGGCGCCCGCGTGC  
GCCATTTCAACAGAAGCCCTGCAGCTCTGGAGCAAGTTCGATGTGGGCGACTGGCTGGAGAGCATCCAC  
TTAGGCGAGCACCGAGACCGCTTCGAGGACCATGAGATCGAAGGCGCACACCTGCCTGCGCTCACCAAGG  
AAGACTTCGTGGAGCTGGGCGTCACACGCTTGGCCACCGCATGAACATCGAGCGTGGCTCAGGAGCT

GGATGGCAGCTGA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGATAAGGTTTAA

<b>Restriction Sites:</b>	SgfI-RsrII
<b>ACCN:</b>	NM_021423
<b>Insert Size:</b>	5193 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>RefSeq:</b>	<u>NM_021423.3, NP_067398.2</u>
<b>RefSeq Size:</b>	7131 bp
<b>RefSeq ORF:</b>	5193 bp
<b>Locus ID:</b>	58234
<b>UniProt ID:</b>	<u>Q4ACU6</u>
<b>Cytogenetics:</b>	15 E3
<b>Gene Summary:</b>	Major scaffold postsynaptic density protein which interacts with multiple proteins and complexes to orchestrate the dendritic spine and synapse formation, maturation and maintenance. Interconnects receptors of the postsynaptic membrane including NMDA-type and metabotropic glutamate receptors via complexes with GKAP/PSD-95 and HOMER, respectively, and the actin-based cytoskeleton. Plays a role in the structural and functional organization of the dendritic spine and synaptic junction through the interaction with Arp2/3 and WAVE1 complex as well as the promotion of the F-actin clusters. By way of this control of actin dynamics, participates in the regulation of developing neurons growth cone motility and the NMDA receptor-signaling. Also modulates GRIA1 exocytosis and GRM5/MGLUR5 expression and signaling to control the AMPA and metabotropic glutamate receptor-mediated synaptic transmission and plasticity. May be required at an early stage of synapse formation and be inhibited by IGF1 to promote synapse maturation.[UniProtKB/Swiss-Prot Function]