

## Product datasheet for **SC109809**

### Synapsin II (SYN2) (NM\_003178) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Synapsin II (SYN2) (NM_003178) Human Untagged Clone
Tag:	Tag Free
Symbol:	Synapsin II
Synonyms:	SYNII
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC109809 sequence for NM\_003178 edited (data generated by NextGen Sequencing)

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ATGATGAACTTCTGCGGCGCCGGCTGTCGGACAGCAGCTTCATCGCCAACCTGCCAAC
GGCTACATGACCGACCTGCAGCGGCCCGAGCCCCAGCAACCGCCGCCGCCGCCGCC
GGTCCGGGCGCCGCTCGGCCTCGGCGGCGCCCCGACCGNNNNNNNGGACCGGAGCGG
AGGCCCGCCCGCCCTCGGCGCCCGCCGAGCCCGCCGACGCCGTGGTGGGACGAG
AGCTTCTTCAGCTCGCTGTCCCAAGCCGTGAAGCAGACGCGCCCTCGGCTGGCCTGGTG
GACGCGCCCGCTCCCGCGCCCGCAGCCGAGGAAGGCCAAGGTGCTGCTGGTGGTCGAC
GAGCCGCACGCCGACTGGGCCAAGTGCTTTCGGGGCAAAAAAGTCCTTGGAGATTATGAT
ATCAAGGTGGAACAGGCAGAATTTTCAGAGCTCAACCTGGTGGCCATGCAGATGGCACC
TATGCTGTGGATATGCAGGTTCTCCGGAATGGCACAAGGTTGTCCGGTCTTCCGGCCA
GACTTCGTGCTCATCCGGCAGCATGCATTTGGCATGGCGGAGAATGAGGACTTCCGCCAC
CTGATCATTGGTATGCAGTATGCAGGCCTCCCCAGCATCAACTACTGGAATCCATATAC
AACTTCTGTGACAAGCCATGGGTGTTTGCCAGCTGGTCGCTATCTATAAGACACTGGGA
GGAGAAAAGTTCCCTCTCATTGAACAGACATACTACCCCAACCACAAAGAGATGCTGACA
CTGCCACGTTCCCTGTGGTGGTGAAGATTGGCCACGCTCACTCAGGCATGGGCAAGGTC
AAAGTGGAAAACCACTACGACTTCCAGGACATTGCCAGCGTGGTGGCTCTCACCCAGACC
TATGCCACTGCAGAGCCTTTCATTGACTCCAAGTATGACATCCGGGTCCAGAAGATTGGC
AACAACTACAAGGCTTACATGAGGACATCGATCTCAGGGAACGGAAAGACGAACACTGGC
TCTGCGATGCTGGAGCAGATTGCCATGTGAGACAGGTACAAAAGTGGGTGGACACTGC
TCTGAGATGTTTGGCGCCTGGACATCTGTGCTGTCAAAGCTGTACATGGCAAAGATGGG
AAAGACTACATTTTTGAGGTCATGGACTGTAGCATGCCACTGATTGGGGAACATCAGTG
GAGGACAGGCAACTCATACCCGAACTAGTCATCAGCAAGATGAACCAGCTGCTGTCCAGG
ACTCCTGCCCTGTCTCCTCAGAGACCCCTAACAAACCAGCAGCCACAGAGCGGAACACTT
AAGGATCCGGAAGCAAGACCCACCTCAGCGGCCACCCCTCAAGTTGTTTACAG
TATATTCTCGACTGTAATGGCATTGCAGTAGGGCCAAAACAAGTCCAAGCTTCTTAA
    
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Clone variation with respect to NM\_003178.4  
 51 t=>c;123 c=>t;161 c=>n;162 c=>n;163 t=>n;164 c=>n;165 g=>n;166 c=>n;167 c=>n;222  
 a=>g;225 a=>g;267 g=>c;270 a=>g;321 g=>c

**5' Read Nucleotide Sequence:**

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>OriGene 5' read for NM_003178 unedited
CGAATTCGGCACGAGGCCTCGCGCCGCGCGGCTTGCTGGCCAGTCCGCCGCTGCTGTC
TGCGGGGTCTGGCGCCGGGGTCTGAGTCTCTGCTGGCTAAGCCGCCGCTCAGCCGCTC
AGTCGCCTCAATCTCGCCTTCCGCCCTCGCTCTCCCTCCGCGCCACCAGACCCCGTAGCC
CCGCGCGCCCCAGCCCTTAAAGCCAGATGATGAACTTCTGCGGCGCCGGCTGTGCGGAC
AGCAGCTTCATCGCCAACCTGCCCAACGGCTACATGACCGACCTGCAGCGGCCGAGCCC
CAGCAGCCGCGCCGCGCCGCCGCCCGGTCCGGGCGCCGCTCGGCCTCGGCGGCGCCC
CCGACCGCCTCGCCGGGCGCGGAGCGGAGGCGCCGCCGCTCGGCGCCCGCGCCGAG
CCCAGCGCCGACCGCTCGGTGGGACGAGCTTCTTTCAGCTCGCTGTCCCAAGCCGTGAAG
CAGACGGTCCGCTCGGCTGGCTGGTGGACGCGCCGCTCCCGCGCCGAGGCGCCAGG
AAGGCCAAGGTGCTGCTGGTGGTGCAGGAGCCGACGCGGACTGGGCCAAGTGCTTTCGG
GGCAAAAAGGCCTTGGAGATTATGATATCAAAGTGAACAGGCAGAATTTTCAGAGCTC
AACCTGGGGGCCATGCAGATGGCACCTATGCTGTGGATATGCAAGCTCTCCGAATGGC
ACAAAGGTTGTCCGGCCCTTCCGGCCAGAATTCGTGCTGATCCGGAGGGTGCATTTGGCA
GGGCGGCAAAAAGGGGACTTCCGCCCTGAACATGGGCTGCATTATGCGGGCCCCCAAGT
CAACCCATGGAATCATATCAACTTTGGGAAAGACAGA
    
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<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_003178 unedited TGGCCTGGTTTTACTATGNAGCCGCGCCGCTATCTANGATCGGATTTTTTTTTTTTTTTTT TTTTTACAGAATAACTTTTCCTTTATTGCACATTAAGCTGTACAAGAGTCACAAAAGAGA GGTACTTCAATCATACTCCAGCATTGGCTGAGGTTCTCCCAGTTGGATCAGTACAAAA AAGGGGACAACGTCAGGAAAGAAATAGGTACAAAACACCTGAATGGCAATCCTATACTGT GACACAGATGTCCCCAGGCCACAGAGTTGTCCCTAAGCATGCTGCCTGAGGGCACATAA CAGTCAGGTTATGCTATCTGCTTGCAATTTGGCAGTGGGAGCCCTAACCAATTTCTCCCC ACCTGAAAGACCTTGACTGACACCACCCTGTAGCCTGACTGAATTCAAATGGCAACTTTG CATTTGTGGCTCACAAATGACACATGAAAAGCACCAGATGTACACACTGATAACATGCAG AGAAGCAATACCACCGTCAGCTCATCGCTTGGACAAAAATATACGATAAAAATAATGTATT CCTCCATTCTGGGAAATGTTACTTTATTCTATCGTTTCATCAGATTGGGAGGATTTAAG GACCTGATTCTTATGCAACCCATCTGGAAGTGCAAATATGCATATATGTATATTTACA ACAGATCAACTACCATTATCAGCTGAGGGAGGGATTACAGATGACAACATTCACACTCAA TGCATTTCTGTGGCCTCAGGATTTACCAGCAATCAAAGGAGAAACCAAGCACAAAGCCC CTGGATACGTAACCTTTGTTACATACCACCAACTAGTTCCTTCTCAGATCTGGGAGTT CAGAACGGTGACATGACAGTATAGAGGTGGAAG
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_003178
<b>Insert Size:</b>	4200 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><a href="#">NM_003178.3</a></u> , <u><a href="#">NP_003169.2</a></u>
<b>RefSeq Size:</b>	3899 bp
<b>RefSeq ORF:</b>	1437 bp
<b>Locus ID:</b>	6854
<b>UniProt ID:</b>	<u><a href="#">Q92777</a></u>
<b>Cytogenetics:</b>	3p25.2
<b>Domains:</b>	Synapsin

**Gene Summary:**

This gene is a member of the synapsin gene family. Synapsins encode neuronal phosphoproteins which associate with the cytoplasmic surface of synaptic vesicles. Family members are characterized by common protein domains, and they are implicated in synaptogenesis and the modulation of neurotransmitter release, suggesting a potential role in several neuropsychiatric diseases. This member of the synapsin family encodes a neuron-specific phosphoprotein that selectively binds to small synaptic vesicles in the presynaptic nerve terminal. Polymorphisms in this gene are associated with abnormal presynaptic function and related neuronal disorders, including autism, epilepsy, bipolar disorder and schizophrenia. Alternative splicing of this gene results in multiple transcript variants. The tissue inhibitor of metalloproteinase 4 gene is located within an intron of this gene and is transcribed in the opposite direction. [provided by RefSeq, Feb 2014]

**Transcript Variant:** This variant (IIb) is alternatively spliced at its 3' end, compared to variant IIa. It encodes isoform IIb, which contains a shorter C-terminus with a distinct domain I, compared to isoform IIa.