

## Product datasheet for MC224967

### Plxnb2 (NM\_138749) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Plxnb2 (NM_138749) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Plxnb2
Synonyms:	Debt; plexin-B2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC224967 representing NM_138749 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGC**C

ATGGCTCTGCCACTCTGGGCCCTGACCTTTCTAGGTCTCACGGGCTAGGGTTGAGCCTGCGGTCCCGAA  
AGCCGGAGAGTTCCGCAGTGAGACAGAGCTGAACCACCTGGCTGTGGATGAGGTACAGGTGTGGTGT  
TGTCCGGGCGAGTGAACCGCTCTACCAGCTGAGTGCCGACCTGCACGTCCAGCAGCAGTGGTCACAGGC  
CCCTTCATGGATAACAAGAAGTGCACACCACCCATTGAGGCCAGCCAGTGCCACGAAGCGGTGCTCACTG  
ACAACCTCAACCAGCTGCTGCTCGACCCACCGGGAAACGCTGGTGGAGTGCGGCAGCCTCTTCAA  
GGGCATCTGTGCCCTGCGCGCCATGAGCAACATCTCGGTGCGCCTCTTCTACGAGGATGGCAGCGGCGAG  
AAGTCCTTCGTGGCCAGCAATGACGAGAGAGTGGCCACCGTGGGGCTGGTACCTCCACGCGCCCGACG  
GCGAGCGCGTGTGTTGTGGGCAAAGGCAATGGGCCGACGACAATGGTATCATCGTGAGCACCCGCT  
GCTGGACAGGGCTGAGGGCCGGGAGGCCTTTGAGGCCTACTCTGACCACACCCTTCAAGGCCGCTAC  
CTGTCCACGAATACTCAGCAGTTGTGCGAGCCTTTGAGGATGATTTCTATGTCTTCTTCGCTTTAACC  
ATCAAGACAAGCATCTGCTAAGAACCAGCAGCTGCTGGCGCGCATGTGCAAGAGCAGCCCTCTACTA  
TTCCTATGTAGAGATGGACCTGCAGTGTGAGGATCCAGTGACCCCAAGACTCTGCCTTTGGCACCTGC  
CTAGCCGCTTCTGTAGCCACATCGGGTCTGGCAGAGCACTTTATGCTGTCTTACGAGAGATGGCCGGA  
GCACTGGGGGACCTGGCGCGGGCCTCTGTGTGTTCCCGCTAGATAAAGTCCGTGAGAAGATAGAAGCCAA  
CCGTAACGCCTGCTACACAGGTGCCGAGAGGCCAGGCCGCACTATCTTCTACAAGCCCTTCCACGGAGAA  
ATCCAGTGTGGCGCCATCTGATAGGTGCCAGCGAGAGCTTCCCATGCGGCTCGGAGCATCTGCCCTATC  
CACTGGCAGTCGTGATGGACTCGTCCGACAGCCGCTGCTGCACCGGGGGCCTGAATCTGACAGCAGT  
GACAGTAACTGCCGAGAATGACCACACTGTTGCGTTCCTGGCACCTCAGATGGCCGGATCCCTAAGGTG  
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AGGACCTGGCACTGTCTGGAAACCTGTCCAGTCTGTATGCTATGACCCAGGACAAGGTGTCCGGCTCCC  
AGTACAAGAATGCCTGAGCTATGTAACCTGCGCTCAGTGTGCTGACTCCCAAGATCCCTACTGTGGCTGG  
TGTGTCATCGAGGGACGATGCACCAGGAAGTCCGAGTGTCTCACGGGCCGAGGAAACCGGACACTGGCTGT



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GGAGCCGGGAGAAGTCTGTGTGGCCATCACTGATGCCTTTCCACAGAACATGAGCCGGCGGGCCCAAGG  
 AGAGGTACGCCTGTCTGTGAGCCCTGCCACCCTGACTGAGGACGATGAGTTACTGTGCCTCTTTGGT  
 GACTCACCACCCACCCTGCCCGGGTAGAGGACGATACCGTCATCTGTAATCCCAAGCAGCATCCCTA  
 GTACACCGCCAGGCCAAGACCATGTTGACGTGAGCATCCAGCTCCTCTTAAAAAGCGGCAGTGTCTTCT  
 CACCTCCCACCAGTATCCCTTCTATGACTGCCGTGAGGCCATGAGCCTGGTGGAGAACCTGCCGTGCATC  
 TCTTGTGCTAGCAACCGCTGGACTTGCCAATGGGACCTGCAGTACTACGAGTGTCTGGGAGGCTTCGCCC  
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 GGTCAATCCCATGAACCATGAGACAGAGGTGACCTTCCAGGGCAAGAACTGGAGACTGTGAAGTTCT  
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 CTTTTAGGACCCCAAAGCTATCCCATGATGGTAATGAGACACTGCCTCTTACCTGTATGTTAAGTCCTT  
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 CTGTGTCTGGCTGCCGATCTGCCTACAGGTGTGTGGTGGCAGAACCCGGTGCCTGTACGAAG  
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 ACCGCCACACGTCAGTTCACTTATCAACAACCCAGCCTCTCAGTGTGGAGCCACGACAGGGGCCACAG  
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 GGCTCCAGGCCAGGTGACACTAGAAATCTACTATGGGGCTCCAGAGTGGCCAGCCCGGCATCTCTTTC  
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 TTCTACAACGACACCAAGGTCTCTTGTCTCCTGCTGTCCCGAAGAGCCCGAGGCTTACAACCTCA  
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 AGACCCACCTTTGAGAACTTACGGGTGGCGTCAAAAAGCAGGTCAACAAGCTCATCCACGCCCGGGGA  
 ACCAATCTGAACAAAGCCATGACTCTGGAGGAGGCAGAGGCATTTGTGGGTGCTGAGCGTTGCATTATGA  
 AGACGCTGACCGAGACGGACCTGTACTGCGAGCCCCAGAGGTGCAGCCTCCACCAAGCGGGCGGAGAA  
 GCGAGACACGGCACACAACCTACCTGAGTTCATTGTGAAGTTTGGCTCCCGAGAGTGGGTGCTAGGCCGA  
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 TGTTTATCATCGTGGTCTCCATCTACTGCTACTGGAGGAAGGCCAGCAGGCCGAGCGCAGTACGAGAA  
 GATCAAATCCCAGCTCGAGGGCTTGGAGGAGAGCGTGCCTGACCCTGCAAGAAGGAATTCACAGACCTG  
 ATGATCGAGATGGAGGACCAGACGAATGACGTGCATGAGGCAGGCATCCCCACGCTGGACTACAAGACCT  
 ACACCGACCGCTATTCTTCTGCCATCCAAGGATGGTGACAAGGATGTGATGATCACCGGCAAGCTAGA  
 CATCCCTGAGTACGGCGGCCATTGTGGAGCAAGCCCTTACCAGTTCTCCAACCTGCTTAATAGCAAG  
 TCCTTCTCATCAATTTTATCCACACCTGGAGAATCAGCGTGAAGTCTCAGCTCGGGCAAGGTCTACT  
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 CCTGGAGCTCATGGAGCAGTATGTGGTGGCCAAGAACCCCAAGCTAATGCTGCGCAGGTCTGAGACAGTG  
 CTCTCTACAAGCTCTTCAAGGCCATCAAACACCAGGTGGAAAAGGGGCCCGTGGATGCTGTGAGAAGAA  
 GGCCAAGTACACCCTCAATGACACAGGCTGCTCGGGGACGATGTTGAGTATGCGCCTCTGACCGTGAGC  
 GTGATTGTTCAAGGATGAAGGATCGATGCCATCCCGGTTAAGGTCCTCAACTGTGACACCATCTCTCAGG  
 TCAAAGAGAAGATCATCGACCAAGTGTACCGTACTCAGCCCTGCTCCTGCTGGCCCAAGCCAGACAGTGT  
 GGTGCTTGAATGGCGTCTGGTCCACGGCCAGATTCTGTCTGACTTGGACCTTACCTCCAGCGGGAG  
 GGCCGGTGAAGCGCATCAACACCTGATGCACTACAACGTCCGGGATGGAGCCACCCTCATCTGTCTA  
 AGGTGGGAGTCTCCAGCAGCCAGAAGACGCCAACAGGACTTGGCAGGGGAGCGCCATGCCCTTCTGGA  
 AGAGGAAAACCGCTGTGGCACTTGGTCCGGCCAACAGATGAGGTAGATGAAGGCAAGTCCAAGCGGGC  
 AGCATGAAGGAGAAAGAGCGGACTAAGGCCATCACAGAGATCTACCTGACGCGGCTACTCTCCGTCGAAGG  
 GCACACTGCAGAGTTTGTGGACAACCTCTTCCAAAGCGTGTGGCGCCTGGGCATGCGGTGCCACCCGC  
 CGTCAAGTACTTCTCGATTTCTTGGACGAGCAGGCAGAGAAGCATGACATCCGAGATGAGGATACCATC  
 CATATCTGAAAACCAACAGTTTACCCTTCCGTTCTGGGTGAACATCCTGAAGAACCCTCATTTTCATCT  
 TTGATGTCCACGTCACGAAGTGGTGGACGCCTCCCTGTGAGTGCATCGCACAGACCTTATGACGCCTG

TACTCGCACGGAGCACAAGCTGAGCCGAGACTCTCCAGCAACAAGCTGTTGTATGCTAAGGAGATCTCT  
ACCTACAAGAAGATGGTGGAGGACTACTACAAGGGCATCAGACAGATGGTGCAGGTGACGACCAGGACA  
TGAATACGCACTTGGCAGAGATTTCCCGGGCTCACACAGACTCCCTGAACACACTCGTGGCCCTACACCA  
GCTCTACCAATACACACAGAAGTACTATGATGAGATCATCAATGCTCTGGAGGAGGACCCTGCAGCCAA  
AAGATGCAACTGGCCTCCGCCTACAGCAGATTGCTGCTGCGCTTGAGAATAAGGTTACAGACCTCTGA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGATAAGGTTTAA

<b>Restriction Sites:</b>	Sgfl-RsrII
<b>ACCN:</b>	NM_138749
<b>Insert Size:</b>	5529 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_138749.3</a></u> , <u><a href="#">NP_620088.2</a></u>
<b>RefSeq Size:</b>	6519 bp
<b>RefSeq ORF:</b>	5529 bp
<b>Locus ID:</b>	140570
<b>UniProt ID:</b>	<u><a href="#">B2RXS4</a></u>
<b>Cytogenetics:</b>	15 44.68 cM

**Gene Summary:**

Cell surface receptor for SEMA4C, SEMA4D and SEMA4G that plays an important role in cell-cell signaling (PubMed:17554007). Plays a role in glutamatergic synapse development and is required for SEMA4A-mediated excitatory synapse development (PubMed:29981480). Binding to class 4 semaphorins promotes downstream activation of RHOA and phosphorylation of ERBB2 at 'Tyr-1248' (PubMed:17554007). Required for normal differentiation and migration of neuronal cells during brain corticogenesis and for normal embryonic brain development (PubMed:19948886). Regulates the migration of cerebellar granule cells in the developing brain (PubMed:21122816). Plays a role in RHOA activation and subsequent changes of the actin cytoskeleton (By similarity). Plays a role in axon guidance, invasive growth and cell migration (By similarity). May modulate the activity of RAC1 and CDC42 (PubMed:21966369). Down-regulates macrophage migration in wound-healing assays (in vitro) (PubMed:21966369).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) differs in the 5' UTR, compared to variant 1. Variants 1-3 encode the same protein.