

## Product datasheet for **RG222057**

### Plexin A1 (PLXNA1) (NM\_032242) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Plexin A1 (PLXNA1) (NM_032242) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Plexin A1
Synonyms:	NOV; NOV; PLEXIN-A1; PLXN1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG222057 representing NM_032242 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGGGCTGAGGCAGGCTTGCCAGGGCAGGCGGGGTTACAGCCCCCTTCGCACCTTCTCGGCCA  
GCGACTGGGGCTCACCCACCTAGTGGTGCATGAGCAGACAGGCGAGGTGTATGTGGGCGCAGTGAACCG  
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TGCTGCTGCTGGACTATGCCGCTAACCGCTGCTGGCCTGTGGCAGCGCCTCCAGGGCATCTGCCAGTT  
CCTGCGTCTGGACGATCTTTAAACTGGGTGAGCCACACCACCGTAAGGAGCACTACCTGTCCAGCGTG  
CAGGAGGCAGGCAGCATGGCGGGCGTGCTCATTGCCGGGCCACCGGGCCAGGGCCAGGCCAAGCTTTCCG  
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AGCTGTGTGCAGTACACGTCCTGTGAGCTGTGTCTGGGGTCACGGGACCCCCACTGTGGCTGGTGTGTCC  
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 AGCCAGTCAACAGCATGAGCGCCTGCACGAGATCTACTCTACATACCAAGTACAAGGATGAGATCC  
 TGGCAGCCCTGGAGAAGGATGAGCAGCGCGCGGCGGAGCAAGCTGGAGCAGGTGGTGA  
 CACGATGCCCTGAGCAGC

ACGCGTACGCGGCGCTCGAG - GFP Tag - GTTAA

**Protein Sequence:**

>RG222057 representing NM\_032242

Red=Cloning site Green=Tags(s)

MWAEAGLPRAGGGSQPPFRFTFSASDWGLTHLVHEQTGEVYVAVNRIYKLSGNLTLLRAHVTGPVEDNE  
 KCYPPPSVQSCPHGLGSTDNVNKLKLLLDYANRLLACGSASQGICQFLRLDDLFLKGEPPHHRKEHYLSSV  
 QEAGSMAGVLIAGPPGQQAQKLVFGTPIIDGKSEYFPTLSSRRLMANEEDADMFGFYQDEFVSSQLKIPS  
 DTLSKFPAFDIYVYVYFRSEQFVYVYLLQLDQLTSPDAAGEHFFTSKIVRLCVDDPKFYSYVEFPIGCE  
 QAGVEYRLVQDAYLSRPGRALAHQLGLAEDEDLFTVFAQGQKNRVKPPKESALCLFTLRAIKEKIKERI  
 QSCYRGEKLSLPWLLNKLGCINSPLQIDDFCGQDFNQPLGGVTIEGTPLFVDKDDGLTAVAAVDYR  
 GRTVVVAGTRSGRIRKILVDLSNPGRRPALAYESVVAQEGSPILRDLVLSPNHQYLYAMTEKQVTRVPVE  
 SCVQYTSCELCGSRDPHCGWCVLHSICSRDADERAEPQRFADLLQCVQLTVQPRNVSVTMSQVPLV  
 LQAWNVPDL SAGVNCSEDFTESESVLEDGRIHCRSPSAREVAPI TRGQGDQRVVLYLKSSETGKFFAS  
 VDFVFNCSVHQSLSCVNGSFPCHWCKYRNVCTHNVADCAFLEGRVNVSEDCPQILPSTQIYVPGVVK  
 PITLAARNLPQPQSGQRGYECLFHIPGSPARVTRFNSSSLQCQNSSSYEGNDVSDLPVNLVSVWNGN  
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 DALVEVCVRDCSPHYRALSPKRF TFVTPTFYRVSPSRGPLSGGTWIGIEGSHLNAGSDVAVSVGGRPCSF  
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 FLYYPDPVLEPLSPTGLLELKPSSPLILKGRNLLPPAPGNSRLNYTVLIGSTPCTLTVSETQLLCEAPNL  
 TGQHKVTVRAGGFEFSPGTLQVYSDSLLTLPATVIGIGGGGGLLLLVIIVAVLIAVKRKRSDADRTLKRLQL  
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 SLTLFGQLLTKKHFLTFIRTLEAQRFSMRDRGNVASLIMTALQGEMEYATGVLKQLLSDLIEKNLESK  
 NHPKLLLRRTESVAEKMLTNWFTFLLYKFLKECAGEPLFMLYCAIKQQMEKGPIDAITGEARYSLSEDKL  
 IRQQIDYKTLTLNVCNPNENAPEVPVKGLDCDTVTQAKEKLLDAAVKGVPSQRPKAADMLEWRQGRM  
 ARIILQDEDVTTKIDNDWKRLNTLAHYQVTDGSSVALVPKQTSAYNISNSSTFTKSLSRYESMLRTASSP  
 DSLRSRTPMITPDLESGTKLWHLVKNHDHLDQREGDRGSKMVSEIYLRLLATKGTQKQFVDDL FETIFS  
 TAHRGSALPLAIKYMDFLDEQADKHQIHDADVRHTWKSACLPLRFWVNVIKNPQFVFDIHKNSITDACL  
 SVVAQTFMDCSCTSEHKL GKDSPSNKLLYAKDIPNYKSWVERYADI AKMPAISDQMSAYLAEQSRHLH  
 SQFNSMSALHEIYSYITKYKDEILAALKDEQARRQLRSKLEQVVDTMALSS

TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



ACCN: NM\_032242

ORF Size: 5619 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_032242.2](#), [NP\\_115618.2](#)

**RefSeq Size:** 9040 bp

**RefSeq ORF:** 5691 bp

**Locus ID:** 5361

**UniProt ID:** [Q9UIW2](#)

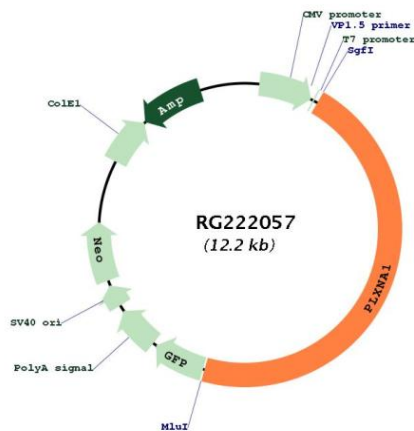
**Cytogenetics:** 3q21.3

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Axon guidance

**Gene Summary:** Coreceptor for SEMA3A, SEMA3C, SEMA3F and SEMA6D. Necessary for signaling by class 3 semaphorins and subsequent remodeling of the cytoskeleton. Plays a role in axon guidance, invasive growth and cell migration. Class 3 semaphorins bind to a complex composed of a neuropilin and a plexin. The plexin modulates the affinity of the complex for specific semaphorins, and its cytoplasmic domain is required for the activation of down-stream signaling events in the cytoplasm (By similarity).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for RG222057