

Product datasheet for **SC328066**

GPR124 (ADGRA2) (NM_032777) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: GPR124 (ADGRA2) (NM_032777) Human Untagged Clone
Tag: Tag Free
Symbol: GPR124
Synonyms: GPR124; TEM5
Mammalian Cell Selection: None
Vector: [pCMV6-XL5](#)
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_032777 edited
GCGGGGCGATGGGTTGATGGGCGCCGGGGACGCAGGATGCGGGGGCGCCCGCGCGCCT
GCTGCTGCCGCTGCTGCCGTGGCTCCTGCTGCTCCTGGCGCCGAGGCTCGGGGCGCGCC
CGGCTGCCCGCTATCCATCCGCAGCTGCAAGTGCTCGGGGGAGCGCCCAAGGGGCTGAG
CGGCGGGCTCCCTGGCCCGGCTCGGCGGAGGGTGGTGTGACGCGCGGGGACCTCCCGGA
GCCTCCCGAGCCCGCCTTCTGCCTAACGGCACCGTTACCCTGCTCTTGAGCAATAACAA
GATCACGGGGCTCCGCAATGGCTCCTTCTGGGACTGTCACTGCTGGAGAAGCTGGACCT
GAGGAACAACATCATCAGCACAGTGCAGCCGGGCGCCTTCTGGGCTGGGGGAGCTGAA
GCGTTTAGATCTCTCAACAACCGGATTGGCTGTCTCACCTCCGAGACCTTCCAGGGCCT
CCCCAGGCTTCTCCGACTAAACATATCTGAAACATCTTCTCCAGTCTGCAACCTGGGGT
CTTTGATGAGCTGCCAGCCCTTAAGTTGTGGACTTGGGCACCGAGTTCTGACCTGTGA
CTGCCACCTGCGCTGGCTGCTGCCCTGGGCCAGAAATCGCTCCCTGCAGCTGTGGAACA
CACGCTCTGTGCTTACCCAGTGCCTGCATGCTCAGGCCTGGGCAGCCTCCAGGAGGC
CCAGCTCTGCTGCGAGGGGGCCCTGGAGCTGCACACACACCACCTCATCCCGTCCCTACG
CCAAGTGGTGTCCAGGGGGATCGGCTGCCCTTCCAGTGTCTGCCAGCTACCTGGGCAA
CGACACCCGCATCCGCTGGTACCACAACCGAGCCCTGTGGAGGGTGTGAGCAGGCGGG
CATCCTCCTGGCCGAGAGCCTCATCCACGACTGCACCTTATCACCAGTGTGAGCTGACGCT
GTCTCACATCGGCGTGTGGGCTCAGGCGAGTGGGAGTGCACCGTGTCCATGGCCCAAGG
CAACGCCAGCAAGAAGGTGGAGATCGTGGTGTGGAGACCTTGCCTCCTACTGCCCCGC
CGAGCGTGTGCAACAACCGCGGGACTTCAGGTGGCCCGAACTCTGGCTGGCATCAC
AGCCTACCAGTCTGCCTGCAGTATCCCTTACCTCAGTGCCCTGGGCGGGGGTGGCC
GGGCACCCGAGCCTCCCGCGGTGTGACCGTGCCGGCCGCTGGGAGCCAGGGGACTACTC
CCACTGTCTACACCAACGACATCACCAGGGTGTGTACACCTTCGTGCTGATGCCAT
CAATGCCTCCAATGCGCTGACCTGGCTCACCAGCTGCGCGTGTACACAGCCGAGCCGC
TAGCTTTTCAGACATGATGGATGTAGTCTATGTGGCTCAGATGATCCAGAAATTTTGGG
TTATGTGACAGATCAAAGAGCTGGTAGAGGTGATGGTGGACATGGCCAGCAACCTGAT
GCTGGTGGACGACCTGCTGTGGCTGGCCAGCGGAGGACAAGGCTGCAGCCGCAT



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CGTGGGTGCCCTGGAGCGCATTGGGGGGCCGCCCTCAGCCCCATGCCAGCACATCTC
 AGTGAATGCGAGGAACGTGGCATTGGAGGCCTACCTCATCAAGCCGCACAGCTACGTGGG
 CCTGACCTGCACAGCCTTCCAGAGGAGGGAGGGAGGGGTGCCGGGCACACGGCCAGGAAG
 CCCTGGCCAGAACCCCCACCTGAGCCCAGCCCCAGCTGACCAGCAGCTCCGTTCCG
 CTGACCACCGGGAGGCCAATGTTTCTGTGTCCTTCCACATCAAGAACAGCGTGGC
 CCTGGCCTCCATCCAGCTGCCCCGAGTCTATTCTCATCCCTCCGGCTGCCCTGGCTCC
 CCGGTGCCCCAGACTGCACCCTGCAACTGCTGCTTCCGAAATGGCCGCCTTTCCA
 CAGCCACAGCAACACTCCCGCCCTGGAGCTGCTGGGCCTGGCAAGAGGGTGGCGTGGC
 CACCCCGTCATCTTCGAGGAACCAAGTGGCTGTGGCGTGGGAAACCTGACAGAGCCAGT
 GGCCGTTTCGCTGCGGCACTGGGCTGAGGGAGCCGAACCTGTGGCCGCTTGGTGGAGCCA
 GGAGGGGGCCGGGAGGCTGGGGCTGGACCTCGGAGGGCTGCCAGCTCCGCTCCAGCCA
 GCCAATGTGAGCGCCCTGCACTGCCAGCACTGGGCAATGTGGCCGTGCTATGGAGCT
 GAGCGCTTTCCAGGGAGGTGGGGGGCCGGGGCAGGGCTGCACCCCGTGGTATACCC
 CTGCACGGCTTGTGCTGCTGCTTTCGCCACCATCATCCTACATCCTCAACCA
 CAGCTCCATCCGTGTGCCGAAAGGCTGGCACATGCTGCTGAACTTGTCTTCCACAT
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 GAAGGCGCGAGTGTCCATAAGGAGCTCACCTGGAGGGCACCCCTCCGCAAGAAGGGGA
 CCCCCTCTGCTACTCCAGTCTATGCTCCGGTTCTATTTGATCGCTGGAGGGATTCC
 ACTCATTATCTGTGGCATCACAGCTGCAGTCAACATCCACAACCTACCGGGACCACAGCCC
 CTACTGCTGGCTGGTGTGGCGTCCAAGCCTTGGCGCTTCTACATCCCTGTGGCTTGTG
 TCTGCTCATCACCTGGATCTATTTCTGTGCGCCGGGCTACGCTTACGGGGTCTCTGGC
 ACAGAACCCCAAGCGGGCAACAGCAGGGCCCTCCCTGGAGGCAGGGGAGGAGCTGAGGG
 TTCCACCAGGCTCAGGGGCAGCGCCCTCCTGAGTACTCAGGTTCCCTTCTTGCTAC
 TGGGAGCGCGAGTGGGGACGCCCGGGCCCGGAGGATGGTGACAGCCTCTATTCTCC
 GGGAGTCCAGCTAGGGCGCTGGTGACCACGCACTTCTGTACTTGGCCATGTGGGCCTG
 CGGGGCTCTGGCAGTGTCCAGCGCTGGCTGCCCGGGTGGTGTGACAGTCTTGTACGG
 GGTGGCAGCTCCGCCCTGGGCTTTCGTCTTCACTCACCAGTGTGCCAGGCGGAGGGA
 CGTGAGAGCTCGTGGCGCGCTGCTGCCCCCTGCCTCTCCCGCGGCCCCCATGCCCC
 GCCCGGGCCCTGCCCGCGCCGAGGACGGTTCGCCGGTGTTCGGGGAGGGCCCCC
 CTCCTCAAGTCTTCCCAAGCGGCAGCAGCGCCATCCGCTGGCTCTGGGCCCTGCAA
 GCTCACCAACCTGCAGCTGGCCAGAGTCAAGTGTGCGAGGCGGGGGCGCGGCCGCGG
 GGAAGGAGAGCCGGAGCCGGCGGGCACCCGGGAAACCTCGCCACCGCCACCCCAACAA
 CGTGCACCACGGGCGTGGGGCGACAAGAGCCGGGCAAGGGACACCGCGGGGGAGGC
 CTGCGGCAAGAACCGGCTCAAGGCCCTGCGCGGGGGCGCGGGGGGGCGCTGGAGCTGCT
 GTCCAGCGAGAGCGGCAGTCTGCACAACAGCCCCACCGACAGCTACCTGGGCAGCAGCCG
 CAACAGCCCGGGCGCCGGCTGCAGCTGGAAGGCGAGCCCATGCTCACGCCGTCCGAGGG
 CAGCGACACCAGCGCCGCGCGCTTTCTGAGGCGGGCCGGCAGGCCAGCGCCGACGCGC
 CAGCCCGACAGTCTCAAGGGCGGGCGCGCTGGAGAAGGAGAGCCATCGCCGCTCGTA
 CCCGCTCAACGCCGCGAGCTAAACGGCGCCCCAAGGGGGCAAGTACGACGACGTCAC
 CCTGATGGGCGCGAGGTAGCCAGCGGGCTGCATGAAGACCGGACTCTGGAAGAGCGA
 AACTACCGTCTAA

Restriction Sites: Please inquire
ACCN: NM_032777
Insert Size: 4000 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 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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_032777.7](#), [NP_116166.7](#)

RefSeq Size: 6050 bp

RefSeq ORF: 4017 bp

Locus ID: 25960

UniProt ID: [Q96PE1](#)

Cytogenetics: 8p11.23

Protein Families: Druggable Genome, Transmembrane

Gene Summary:

Endothelial receptor which functions together with RECK to enable brain endothelial cells to selectively respond to Wnt7 signals (WNT7A or WNT7B) (PubMed:28289266, PubMed:30026314). Plays a key role in Wnt7-specific responses, such as endothelial cell sprouting and migration in the forebrain and neural tube, and establishment of the blood-brain barrier (By similarity). Acts as a Wnt7-specific coactivator of canonical Wnt signaling: required to deliver RECK-bound Wnt7 to frizzled by assembling a higher-order RECK-ADGRA2-Fzd-LRP5-LRP6 complex (PubMed:30026314). ADGRA2-tethering function does not rely on its G-protein coupled receptor (GPCR) structure but instead on its combined capacity to interact with RECK extracellularly and recruit the Dishevelled scaffolding protein intracellularly (PubMed:30026314). Binds to the glycosaminoglycans heparin, heparin sulfate, chondroitin sulfate and dermatan sulfate (PubMed:16982628).[UniProtKB/Swiss-Prot Function]