

## Product datasheet for **RC219857**

### **PCDHGA12 (NM\_003735) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PCDHGA12 (NM_003735) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PCDHGA12
Synonyms:	CDH21; FIB3; PCDH-GAMMA-A12
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC219857 representing NM\_003735  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGCATCGCC

ATGATTCTCGCGACTGCACCGGACTACAAAGGCTTGTCTGCTGGGAATCCTCTGGGACTCTGT  
 GGGAGACCGGATGCACCCAGATACGCTATTCAGTTCGGAAGAGCTGGAGAAAGGCTCTAGGGTGGGCGA  
 CATCTCCAGGGACCTGGGGCTGGAGCCCGGGAGCTCGCGGAGCGCGAGTCCGCATCATCCCCAGAGGT  
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 AGCTCTGTATGGGGCCATCAAGTGTCAATTAATCTAGACATTCTGATGGAGGATAAAGTGAAAAATA  
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 AGAATCTCTGCAGAGCTACGAGCTCAGCCGAACACTCACTTCTCCCTCATCGTCAAAAATGGAGCCGA  
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 TAGGGGAGTTGGACCACGAGGAGTCAAGATTCTACCAGATGGAAGTGAAGCAATGGATAATGCAGGATA  
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 AGGAGTTTCCCTCGTCTGTGACCGCCACGACCCGACTGTGAAGAGAACGCCAGATCACTTATTCC  
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 CCGGCTACCTGGTGACCAAGGTGGTGGCGGTGGACAGAGACTCCGGCCAGAACGCCTGGCTGCTACCG  
 TCTGCTCAAGGCCAGCGAGCCGGGACTTCTCGGTGGTCTGCACACGGGCGAGGTGCGCACGGCGCGA  
 GCCCTGTGGACAGAGACGCGCTCAAGCAGAGCCTCGTAGTGGCCGTCCAGGACCACGGCCAGCCCCCTC  
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 TCCTGCGTCTTCTGGCCTTCGTCATCTTGCTGCTGGCGCTCAGGCTGCGGCGTGGCACAAGTACGCC  
 TGCTGCAGGCTTACAGAGCGGCTTGACAGGAGCGCCGGCTCGCACTTTGTGGCGTGGACGGGGTGA  
 GGCTTTCTGAGACCTATTCCACGAGGTTTCCCTACCACGGACTCGCGGAAGAGTCACTGATCTTC  
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 AACAGTTTGACACAGAGATGCTGCAAGCCATGATCTTGGCGTCCGCCAGTGAAGCTGCTGATGGGAGCT  
 CCACCCTGGGAGGGGTGCCGACCATGGGATTGAGCGCCGCTACGGACCCAGTTACCCTGCAGCA  
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 CGGGATGGCAAGGCCCCAGCAGGTGGCAATGGCAACAAGAAGAAGTGGGCAAGAAGGAGAAGAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAAGTTTAA

Protein Sequence: >RC219857 representing NM\_003735  
 Red=Cloning site Green=Tags(s)

MIPARLHRDYKGLVLLGILLGTLWETGCTQIRYSVPEELEKGSRVGDISRDLGLEPRELAERGVRIIPRG  
 RTQLFALNPRSGSLVTAGRIDREELCMGAIKQQLNDILMEDKVKIYGVVEVRDINDNAPYFRESELEI  
 KISENAATEMRFPLPHAWDPDIGKNSLQSYELSPNTHFSLIVQNGADGSKYPELVLRALDREEKAAHHL  
 VLTASDGGDPVRTGTARIRVMVLDANDNAPAFAPQPEYRASVPENLALGTQLLVNATDPDEGVNAEVRYS  
 FRYVDDKAAQVFKLDCNSGTISTIGELDHEESGFYQMEVQAMDNAGYSARAKVLIITVLDVNDNAPEVLT  
 SLASSVPENSPRGTLIALLNVDQDSEENGQVICFIQGNLPFKLEKSYGNYYSLVTDIVLDREQVPSYNI  
 TVTATDRGTPPLSTETHISLNVADTNDNPPVFPQASYSAYIPENNPRGVSLVSVTAHDPDCEENAQITYS  
 LAENTIQQASLSSYVSINSDTGVLVALSSFDYEQFRDLQVKVMARDNGHPPLSSNVLSLFLVDQNDNAP  
 EILYPALPTDGGSTGVELAPRSAEPGYLVTKVAVDRDSGQNAWLSYRLLKASEPGLFSVGLHTGEVRTAR  
 ALLDRDALKQSLVVAVQDHGQPPLSATVTLTVAVADSIPQVLADLGSLESPANSETSDLTYLVVAVAAV  
 SCVFLAFVILLALLRLRRWHKSRLLQASGGGLTGAPASHFVGVDGVQAFLLQTYSHVSLTDSRKSHLIF  
 POPYADMLVSQESFEKSEPLLLSGDSVFSKDSHGLIEQAPPNTDWRFSQAQRPGTSGSQNGDDTGTWPN  
 NQFDTEMLQAMILASASEAADGSSTLGGGAGTMGLSARYGPQFTLQHPDYRQNVYIPGSNATLTNAAGK  
 RDGKAPAGGNGNKKKSGKKEKK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk8008\\_a06.zip](https://cdn.origene.com/chromatograms/mk8008_a06.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



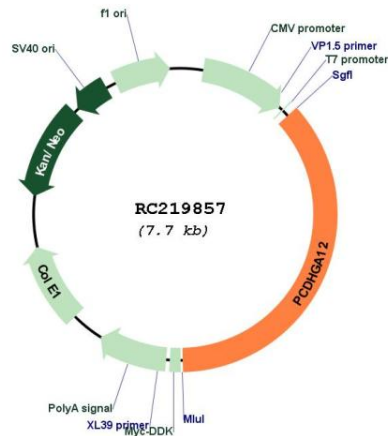
\* The last codon before the Stop codon of the ORF

ACCN: NM\_003735

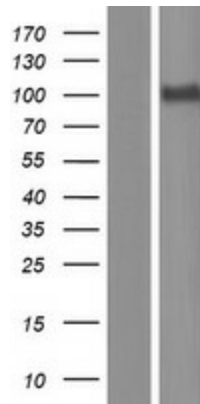
ORF Size: 2796 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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>	<a href="#">NM_003735.3</a>
<b>RefSeq Size:</b>	4774 bp
<b>RefSeq ORF:</b>	2799 bp
<b>Locus ID:</b>	26025
<b>UniProt ID:</b>	<a href="#">O60330</a>
<b>Cytogenetics:</b>	5q31.3
<b>Domains:</b>	CA
<b>Protein Families:</b>	Transmembrane
<b>MW:</b>	100.96 kDa
<b>Gene Summary:</b>	This gene is a member of the protocadherin gamma gene cluster, one of three related clusters tandemly linked on chromosome five. These gene clusters have an immunoglobulin-like organization, suggesting that a novel mechanism may be involved in their regulation and expression. The gamma gene cluster includes 22 genes divided into 3 subfamilies. Subfamily A contains 12 genes, subfamily B contains 7 genes and 2 pseudogenes, and the more distantly related subfamily C contains 3 genes. The tandem array of 22 large, variable region exons are followed by a constant region, containing 3 exons shared by all genes in the cluster. Each variable region exon encodes the extracellular region, which includes 6 cadherin ectodomains and a transmembrane region. The constant region exons encode the common cytoplasmic region. These neural cadherin-like cell adhesion proteins most likely play a critical role in the establishment and function of specific cell-cell connections in the brain. Alternative splicing has been described for the gamma cluster genes. [provided by RefSeq, Jul 2008]

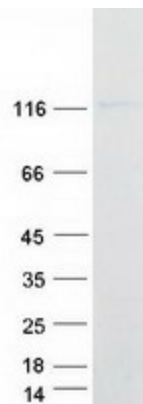
Product images:



Circular map for RC219857



Western blot validation of overexpression lysate (Cat# [LY418460]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219857 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PCDHGA12 protein (Cat# [TP319857]). The protein was produced from HEK293T cells transfected with PCDHGA12 cDNA clone (Cat# RC219857) using MegaTran 2.0 (Cat# [TT210002]).