

Product datasheet for **RC221339**

Amyloid Precursor Protein (APP) (NM_000484) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Amyloid Precursor Protein (APP) (NM_000484) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Amyloid Precursor Protein
Synonyms:	AAA; ABETA; ABPP; AD1; alpha-sAPP; APPI; CTFgamma; CVAP; PN-II; PN2; preA4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC221339 representing NM_000484
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

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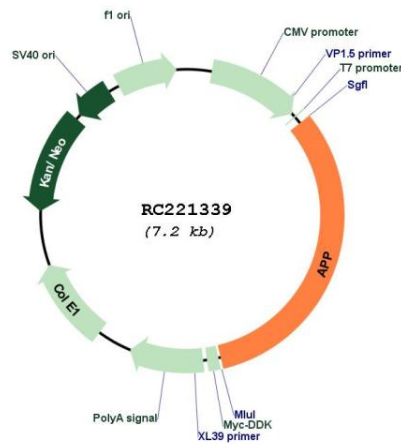
**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA**

OTI Disclaimer:	<p>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.</p> <p>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</p>
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:	<ol style="list-style-type: none"> 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_000484.4
RefSeq Size:	3641 bp
RefSeq ORF:	2313 bp
Locus ID:	351
UniProt ID:	P05067
Cytogenetics:	21q21.3
Domains:	Beta-APP, KU, A4_EXTRA
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Alzheimer's disease
MW:	86.94 kDa

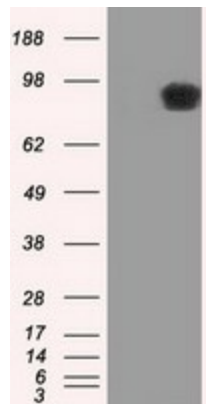
Gene Summary:

This gene encodes a cell surface receptor and transmembrane precursor protein that is cleaved by secretases to form a number of peptides. Some of these peptides are secreted and can bind to the acetyltransferase complex APBB1/TIP60 to promote transcriptional activation, while others form the protein basis of the amyloid plaques found in the brains of patients with Alzheimer disease. In addition, two of the peptides are antimicrobial peptides, having been shown to have bacteriocidal and antifungal activities. Mutations in this gene have been implicated in autosomal dominant Alzheimer disease and cerebroarterial amyloidosis (cerebral amyloid angiopathy). Multiple transcript variants encoding several different isoforms have been found for this gene. [provided by RefSeq, Aug 2014]

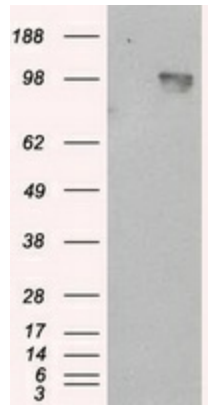
Product images:



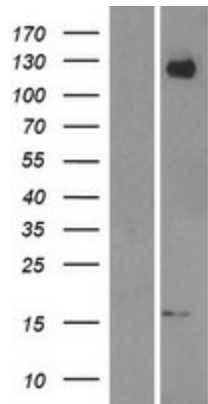
Circular map for RC221339



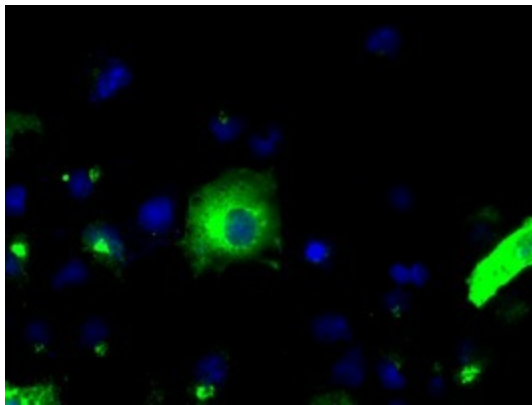
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY APP (Cat# RC221339, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-APP (Cat# [TA500973]). Positive lysates [LY424694] (100ug) and [LC424694] (20ug) can be purchased separately from OriGene.



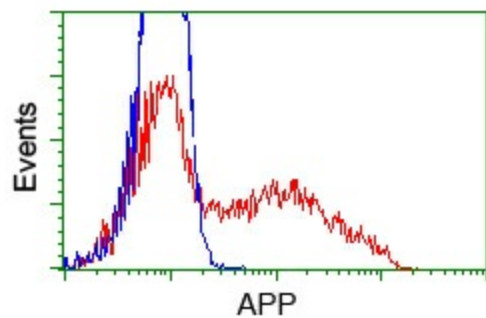
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY APP (RC221339, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-APP ([TA500969]). Positive lysates [LY424694] (100ug) and [LC424694] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424694]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221339 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Anti-APP mouse monoclonal antibody ([TA500969]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY APP (RC221339).



HEK293T cells transfected with either pCMV6-ENTRY APP (RC221339) (Red) or empty vector control plasmid (Blue) were immunostained with anti-APP mouse monoclonal ([TA500969]), and then analyzed by flow cytometry.