

Product datasheet for **RC210521**

Aminopeptidase A (ENPEP) (NM_001977) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aminopeptidase A (ENPEP) (NM_001977) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aminopeptidase A
Synonyms:	APA; CD249; gp160
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC210521 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAC**TTT**CGGAGAGAGAGGGCTCTAAGAGATACTGCATTCAAACGAAACATGTGGCCATTCTCTGTG
 CGGTGGTGGTGGGTGTAGGATTAATAGTGGGACTTGCCGTGGGCTTGACCAGATCGTGTGACTCCAGCGG
 GGACGGCGGGCCGGGCACTGCGCCAGCTCCTTCCACCTGCCTTCTCCACGGCCAGCCCTCAGGTCTT
 CCTGCCAGGACCAGGACATCTGCCCGGCCAGTGAGGATGAGAGCGGACAGTGGAAAACTTTCGACTGC
 CGGACTTCGTCAACCCAGTCCACTACGACTGCACGTGAAGCCCTGTTGGAGGAGGACCTACACGGG
 CACCGTGAGCATCTCCATCAACCTGAGCGCTCCACCCGGTACCTGTGGCTGCACCTCCGGGAGACCAGG
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 CCTGACCATGGAGTTCGCCGGCTGGCTGAACGGCTCCCTCGTGGGATTTTATAGAACCACCTACACGGAG
 AACGGACGAGTCAAGAGCATAGTGGCCACCGATCATGAACCAACAGATGCCAGGAAATCTTTTCCTTGTT
 TTGATGAGCCCAACAAAAGGCAACTTATACAATATCTATCACCCATCCCAAAGAATACGGAGCACTTTC
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 ACAATATAGAGTGGCTAAAACAACATAGAAACACCATCAGAGAATGGTTTTTTAATTTACTTGAGAGTGG
 T

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC210521 protein sequence
 Red=Cloning site Green=Tags(s)

MNFAEREGSKRYCIQTKHVAILCAVVVGVGLIVGLAVGLTRSCDSSGDGGPGTAPAPSHLPSSTASPSGP
 PAQDQDIPCASEDESGQWKNFRLPDFVNPVHYDLHVKPLLEEDTYGTVVISINLSAPTRYLWLHLRETR
 ITRLPELKRPSGDQVQVRRCFEYKKQEYVVVEAEEELTPSSGDGLYLLTMEFAGWLNGSLVGFYRTTYTE
 NGRVKSIVATDHEPTDARKSFPCFDEPNKATYTI SITHPKEYGALSNMPVAKEESVDDKWTRRTTFEKS
 PMSTYLVCFAVHQFDSVKRISNSGKPLTIYVQPEQKHTAEYAANITKSVFDYFEEYFAMNYSLPKLDKIA
 IPDFGTGAMENWGLITYRETNLLYDPKESASSNQQRVATVVAHEL VHQWFGNIVTMDWEDLWLNFGFAS
 FFEFLGVNHAETDQMRDQMLLEDVLPVQEDDSLMSHP IIVTVTPDEITSVFDGISYSKGSILRMLE
 DWIKPENFQKGCQMYLEKYQFKNKTSDFWAAL EASRLPVKEVMDTWTRQMGYPVLNVNGVKITQKRF
 LLDPRANPSQPPSDLGYTWNIPVKWTE D NITSSVL FNRSEKEGITLNSSNPSGNAFLKINPDHIGFYRVN
 YEVATWDSIATALSLNHKTFSSADRASLIDDAFALARAQLLDYKVALNLTKYLKREENFLPWQRVISA
 VTYIISMFEDDKEL YPMIEEYFQGGVKPIADSLGWNDAGDHVTKLLRSSVLGFACKMGDREALNNSSLFEQ
 WLNGTVSLPVNLRLLVYRYGMQNSGNEISWNYTLEQYQKTS LAQEKEKLLYGLASVKNVTLLSRYL
 DLLKDTNLIKTQDVFTVIRYISYNSYKGNMAWNIQLNWDYLVNRYTLNRRNLGRIVTIAEPFNT
 ELQLWQMESFFAKYPQAGAGEKPREQVLETVKNNIEWLKQHRNTIREWFFNLLESG

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6693_h04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



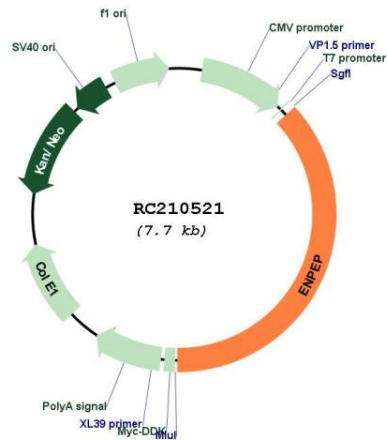
* The last codon before the Stop codon of the ORF

ACCN: NM_001977

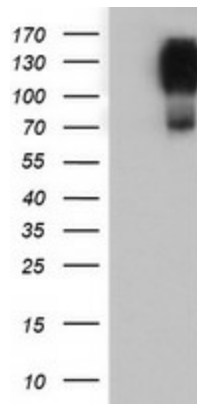
ORF Size: 2871 bp

OTI Disclaimer:	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:	<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.
RefSeq:	NM_001977.2 , NP_001968.2
RefSeq Size:	5004 bp
RefSeq ORF:	2874 bp
Locus ID:	2028
UniProt ID:	Q07075
Cytogenetics:	4q25
Domains:	Peptidase_M1
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Protease, Transmembrane
Protein Pathways:	Renin-angiotensin system
MW:	109.3 kDa
Gene Summary:	The ENPEP gene encodes glutamyl aminopeptidase, a type II integral membrane protein with an extracellular zinc-binding domain. This protein can upregulate blood pressure by cleaving the N-terminal aspartate from angiotensin II, and can regulate blood vessel formation and enhance tumorigenesis in some tissues. Along with ANPEP and DPP4, ENPEP was found to be a candidate co-receptor for the coronavirus SARS-CoV-2, which causes COVID-19. [provided by RefSeq, Apr 2020]

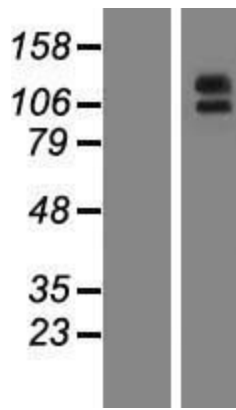
Product images:



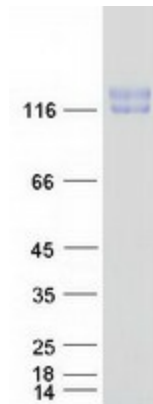
Circular map for RC210521



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ENPEP (Cat# RC210521, 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-ENPEP (Cat# [TA504251]). Positive lysates [LY419610] (100ug) and [LC419610] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419610]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210521 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ENPEP protein (Cat# [TP310521]). The protein was produced from HEK293T cells transfected with ENPEP cDNA clone (Cat# RC210521) using MegaTran 2.0 (Cat# [TT210002]).