

Product datasheet for **RG208950**

CD13 (ANPEP) (NM_001150) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD13 (ANPEP) (NM_001150) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CD13
Synonyms:	APN; CD13; GP150; LAP1; P150; PEPN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG208950 representing NM_001150
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCCAAGGCTTCTATATTTCCAAGTCCCTGGGCATCCTGGGGATCCTCTGGGCGTGGCAGCCGTGT
 GCACAATCATCGCACTGTCAAGTGGTACTCCAGGAGAAGAACAAGAAGCCCAACAGCTCCCCGTGGC
 CTCACCACCCCGTCCGCCTCAGCCACCACCAACCCCGCCTCGGCCACCACCTTGACCAAAAGTAAAGCG
 TGGAAATCGTTACCGCTCCCAACACGCTGAAACCCGATTCTACCGGGTACGCTGAGACCGTACCTCA
 CCCCCAATGACAGGGGCTGTACGTTTTAAAGGGCTCCAGCACCGTCCGTTTACCTGCAAGGAGGCCAC
 TGATGTCATCATCATCCACAGCAAGAAGCTCAACTACACCCTCAGCCAGGGGCACAGGGTGGTCTGCGT
 GGTGTGGGAGGCTCCAGCCCCGACATTGACAAGACTGAGCTGGTGGAGCCCACCGAGTACCTGGTGG
 TGCACCTCAAGGGCTCCCTGGTGAAGGACAGCCAGTATGAGATGGACAGCGAGTTCGAGGGGGAGTTGGC
 AGATGACCTGGCGGGCTTCTACCGCAGCGAGTACATGGAGGGCAATGTCAGAAAGTGGTGGCCACTACA
 CAGATGCAGGCTGCAGATGCCCGGAAGTCTTCCCATGCTTCGATGAGCCGGCCATGAAGGCCGAGTTCA
 ACATCACGCTTATCCACCCAAGGACCTGACAGCCCTGTCCAACATGCTTCCCAAAGTCCCAGCACCCC
 ACTTCCAGAAGACCCCAACTGGAATGTCAGTTCACACCACGCCCAAGATGTCACCGTACTTGGTGG
 GCCTTCATTGTCAGTGTGACTACGTGGAGAAGCAGGCATCCAATGGTGTCTTGATCCGGATCTGGG
 CCCGGCCAGTGCATTGCGGTGGGCCACGGCGATTATGCCCTAACGTGACAGGCCCATCCTTAACTT
 CTTTGTGGTCAATATGACACACCCTACCACTCCCAAAATCAGACCAGATTGGCTGCCAGACTTCAAC
 GCCGGCCCATGGAGAAGTGGGACTGGTACCTACCGGAGAAGTCCCTGCTGTTCGACCCCTGTCTCT
 CCTCCAGCAGCAACAAGGAGCGGGTGGTCACTGTGATTGCTCATGAGCTGGCCACCAGTGGTTCGGGAA
 CCTGGTACCATAGAGTGGTGAATGACCTGTGGCTGAACGAGGGCTTCGCCTCCTACGTGGAGTACCTG
 GGTGCTGACTATGCGGAGCCACCTGGAAGTGAAGACCTCATGGTGTGAATGATGTGTACCGGTGA
 TGGCAGTGGATGCACTGGCTCCTCCCACCCGCTGTCCACACCCGCTCGGAGATCAACACGCCGCCCA
 GATCAGTGTGCTTTGACGCCATCTCCTACAGCAAGGGCGCCTCAGTCTCAGGATGCTCTCCAGCTTC
 CTGTCCGAGGACGATTCAAGCAGGGCCTGGCGTCTACCTCCACACCTTGCCTACCAGAACACCATCT
 ACCTGAACCTGTGGACACCTGCAGGAGGCTGTGAACAACCGGTCCATCCAACCTCCCACCACCGTGGC
 GGACATCATGAACCGCTGGACCTGCAGATGGGCTTCCCGGTATCACGGTGGATACCAGCACGGGGACC
 CTTTCCCAGGAGCACTTCTCCTTGACCCCGATTCCAATGTTACCGCCCTCAGAACTCAACTACGTGT
 GGATTGTGCCATCACATCCATCAGAGATGGCAGACAGCAGCAGGACTACTGGCTGATAGATGTAAGAGC
 CCAGAACGATCTTTCAGCACATCAGGCAATGAGTGGGTCTGTGAACCTCAATGTGACGGGCTATTAC
 CGGGTGAACACGACGAAGAGAAGTGGAGGAAGATTGAGACTCAGCTGCAGAGAGACCACTCGGCCATCC
 CTGTCAATCGGGCACAGATCATTATGACGCCCTCAACCTGGCCAGTGGCCATAAGGTCCCTGTCCAC
 TCTGGCGTGAACAACACCCTCTTCTGATTGAAGAGAGACAGTACATGCCCTGGGAGGCCGCCCTGAGC
 AGCCTGAGCTACTTCAAGCTCATGTTTGACCGCTCCGAGGTCTATGGCCCATGAAGAATACCTGAAGA
 AGCAGGTACACCCCTCTTCACTTCAAGAAATAATACCAACAACCTGGAGGGAGATCCAGAAAACT
 GATGGACCAGTACAGCGAGGTTAATGCCATCAGCACCCCTGCTCCAACGGAGTTCAGAGTGTGAGGAG
 ATGGTCTCTGGCCTTTTCAAGCAGTGGATGGAGAACCCCAATAATAACCCGATCCACCCCAACTGCGGT
 CCACCGTCTACTGCAACGCTATCGCCAGGGCGGGGAGGAGGAGTGGGACTTCGCCTGGGAGCAGTTCGG
 AAATGCCACACTGGTCAATGAGGCTGACAAGCTCCGGGCAGCCCTGGCCTGCAGCAAAGATTGTGGATC
 CTGAACAGGTACCTGAGCTACACCCTGAACCCGACTTAATCCGGAAGCAGGACGCCACCTTACCATCA
 TCAGCATTACCAACAACGTCATTGGGCAAGTCTGGTCTGGGACTTTGTCCAGAGCAACTGGAAGAAGCT
 TTTTAAACGATTATGGTGGTGGCTCGTTCTCTTCTCAACCTCATCCAGGCAGTACACGACGATTCTCC
 ACCGAGTATGAGCTGCAGCAGCTGGAGCAGTTCAGAAGGACAACGAGGAAACAGGCTTCGGCTCAGGCA
 CCCGGGCCCTGGAGCAAGCCCTGGAGAAGACGAAAGCCAACATCAAGTGGTGAAGGAGAACAAGGAGT
 GGTGCTCCAGTGGTTCACAGAAAACAGCAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG208950 representing NM_001150
 Red=Cloning site Green=Tags(s)

MAKGFYISKSLGILGILLGVAAVCTIIALSVVYSQEKKNANSSPVASTTPSASATTNPASATTLDDQSKA
 WNRYYRLPNTLKPDSYRVTLRPYLTPNDRGLYVFKGSSTVRFCKEATDVIIHSHKLNLYTL SQGHRVVLR
 GVGGSQPPDIDKTELVEPTEYL VVHLKGLVKDSQYEMDSEFEGELADLAGFYRSEYMEGNVRKVVATT
 QMQAADARKSFPCFDEPAMKAEFNITLIHPKDLTALSNMLPKGPSTPLPEDPNWNVTEFHTTPKMSTYLL
 AFIVSEFDYVEKQASNGVLRIRIWARPSAIAVGHGDYALNVTGPILNFFAGHYDTPYPLPKSDQIGLPDFN
 AGAMENWGLVTYRENSLLFDPLSSSSSNKERVVTVIAHEL AHQWFGNLVTIEWVNDLWLN EGFASYVEYL
 GADYAEPTWNLKDLMLVNDVYRVMAVDALASSHPLSTPASEINTPAQISELFD AISYSKGASVLRMLSSF
 LSEDEVFKQLASYLHTFAYQNTIYLNLDHLEAVNNRSIQLPTTVRDI MNRWTLQMGFPVITVDTSTGT
 LSQEHFLLDPDSNVTRPSEFNYYVWIVPITSIRDGRQQDYWLIDVRAQNDL FSTSGNEWVLLNLTGY
 RVNYDEENWRKIQTQLQRDHS AIPVINRAQIINDAFNLASAHKVPVTLALNNTLFLIEERQYMPWEAALS
 SLSYFKLMFDRSEVYGP MKNYKKQVTPLF IHFRNNTNWR EIPENLMDQYSEVNAISTACNGVPECEE
 MVSGLFKQWMENPNNP IHPNL RSTVYCNAIAQGGEEWDF AWEQFRNATLVNEADKLRALACSKELWI
 LNRYLSYTLNPD LIRKQDATSTIISITNNVIGQLVWDFVQSNWKKLFNDYGGGSF SFSNLIQAVTRRFS
 TEYELQQL EQFKKDNEETGFGSGTRALEQALEKTKANIKWVKENKEVVLQWFTENSK

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



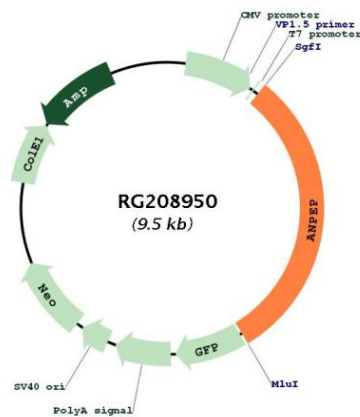
ACCN: NM_001150

ORF Size: 2901 bp

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.
RefSeq:	NM_001150.1 , NP_001141.1
RefSeq Size:	3494 bp
RefSeq ORF:	2904 bp
Locus ID:	290
UniProt ID:	P15144
Cytogenetics:	15q26.1
Domains:	Peptidase_M1
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Protease, Transmembrane
Protein Pathways:	Glutathione metabolism, Hematopoietic cell lineage, Metabolic pathways, Renin-angiotensin system

Gene Summary:

Aminopeptidase N is located in the small-intestinal and renal microvillar membrane, and also in other plasma membranes. In the small intestine aminopeptidase N plays a role in the final digestion of peptides generated from hydrolysis of proteins by gastric and pancreatic proteases. Its function in proximal tubular epithelial cells and other cell types is less clear. The large extracellular carboxyterminal domain contains a pentapeptide consensus sequence characteristic of members of the zinc-binding metalloproteinase superfamily. Sequence comparisons with known enzymes of this class showed that CD13 and aminopeptidase N are identical. The latter enzyme was thought to be involved in the metabolism of regulatory peptides by diverse cell types, including small intestinal and renal tubular epithelial cells, macrophages, granulocytes, and synaptic membranes from the CNS. This membrane-bound zinc metalloprotease is known to serve as a receptor for the HCoV-229E alphacoronavirus as well as other non-human coronaviruses. This gene has also been shown to promote angiogenesis, tumor growth, and metastasis and defects in this gene are associated with various types of leukemia and lymphoma. [provided by RefSeq, Apr 2020]

Product images:

Circular map for RG208950