

Product datasheet for RC211220

EN2 (NM_001427) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	EN2 (NM_001427) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	EN2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC211220 representing NM_001427 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGGAGAATGACCCCAAGCCTGGCGAAGCAGCGGGCGCGGTGGAGGGACAGCGGCAGCCGGAATCCA
GCCCCGGCGGGCTCGGGCGGGCGGGCGGTAGCAGCCAGGCGAAGCGGACACCGGGCGCCGGCGGGC
TCTGATGCTGCCCGGGTCTGCAGGCGCCCGGCAACCACCAGCACCCGCACCGCATCACCAACTTCTTC
ATCGACAACATCCTCGGCCCGAGTTCGGCCGGCGAAAGGACGCGGGGACCTGCTGTGCGGGCGGGGAG
GAGGAAGGGCGGGAGCCGGCGGCGAAGGCGGCGGAGCGGTGCGGAGGGAGGCGGGCGGGCGGGCGG
CTCGGAGCAGCTTTGGGCTCGGGCTCCCGAGAGCCCCGGCAGAACC CGCATGTGCGCCCGCGCGGGC
GGGCCGCTCCCAGCCCGGCAGCGACTCTCCGGGTGACGGGGAAGGCGGCTCCAAGACGCTCTCGCTGC
ACGGTGGCGCAAGAAAGGCGGCGACCCCGGGCGCCCTGGACGGGTGCTCAAGGCCCGGGCTTGGG
CGGCGGCGACTGTGCGTGAGCTCGGACTCGGACAGCTCGCAAGCCGGCGCAACCTGGGCGCGCAGCCC
ATGCTCTGGCCGGCTGGGTCTACTGTACGCGCTACTCGGACCGGCTTCTTCAGGTCCCAGGTCTCGAA
AACCAAAGAAGAAGAACCCGAACAAGAGGACAAGCGGCCGCGCACGGCCTTTACCGCCGAGCAGCTGCA
GAGGCTCAAGGCCGAGTCCAGACCAACAGGTACCTGACGGAGCAGCGGCCAGAGCCTGGCGCAGGAG
CTGAGCCTCAACGAGTCACAGATCAAGATTTGGTTCCAGAACAAGCGCGCAAGATCAAGAAGGCCACGG
GCAACAAGAACACGCTGGCCGTGCACCTCATGGCACAGGGCTTGTACAACCACTCCACCACAGCCAAGGA
GGCAAGTCGGACAGCGAG

ACGCGTACGCGGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC211220 representing NM_001427
Red=Cloning site Green=Tags(s)

```
MEENDPKPGEAAAIVEGQRQPESPPGGSGGGGGSSPGEADTGRRRALMLPAVLQAPGNHQHPHRI TNFF
IDNILRPEFGRRKDAGTCCAGAGGGRRGGAGGEGGASGAEGGGGAGGSEQLL GSGSREPRQNPPCAPGAG
GPLPAAGSDSPGDGEGGSKTSLHGGAKKGGDPGGPLDGLSKARLGGGDL SVSSDSDSSQAGANLGAQP
MLWPAWVYCTRYSDRPPSSGPRSRKPKKKNPKNKEDKRPRTAFTAELQRLKAEFQTNRYL TEQRRQSLAQE
LSL NESQIKIWFQNKRAKIKKATGNKNLAVHLMAQGLYNHSTTAKEGKSDSE
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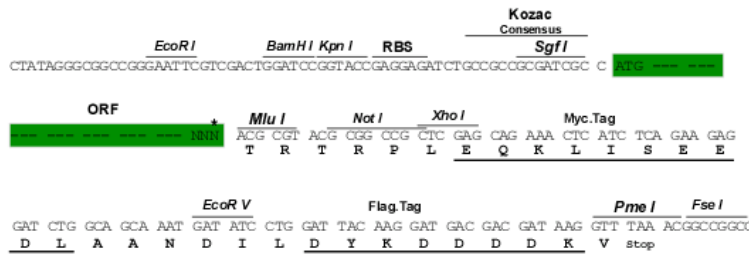
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg4542_b04.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_001427

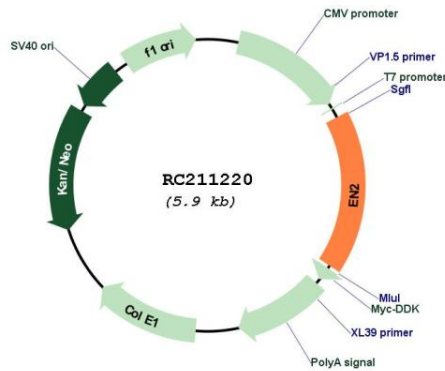
ORF Size: 999 bp

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.

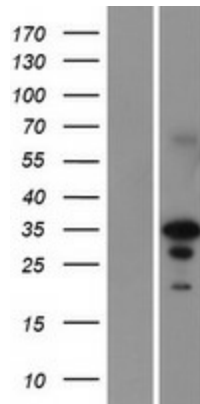
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation:	This 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_001427.2 , NP_001418.2
RefSeq Size:	3405 bp
RefSeq ORF:	1002 bp
Locus ID:	2020
UniProt ID:	P19622
Cytogenetics:	7q36.3
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS
MW:	34 kDa
Gene Summary:	Homeobox-containing genes are thought to have a role in controlling development. In Drosophila, the 'engrailed' (en) gene plays an important role during development in segmentation, where it is required for the formation of posterior compartments. Different mutations in the mouse homologs, En1 and En2, produced different developmental defects that frequently are lethal. The human engrailed homologs 1 and 2 encode homeodomain-containing proteins and have been implicated in the control of pattern formation during development of the central nervous system. [provided by RefSeq, Jul 2008]

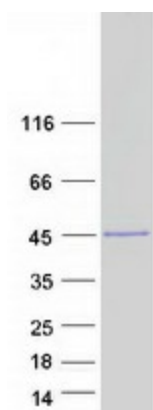
Product images:



Circular map for RC211220



Western blot validation of overexpression lysate (Cat# [LY419943]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211220 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified EN2 protein (Cat# [TP311220]). The protein was produced from HEK293T cells transfected with EN2 cDNA clone (Cat# RC211220) using MegaTran 2.0 (Cat# [TT210002]).