

## Product datasheet for **RC221818**

### Midkine (MDK) (NM\_001012334) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Midkine (MDK) (NM\_001012334) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Midkine  
**Synonyms:** ARAP; MK; NEGF2  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC221818 representing NM\_001012334  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCAGCACCGAGGCTTCTCCTCCTCACCTCCTCGCCCTACTGGCGCTCACCTCCGCGGTGCCCCAAA  
AGAAAGATAAGGTGAAGAAGGGCGGCCCGGGGAGCGAGTGCCTGAGTGGGCCTGGGGCCCTGCACCCC  
CAGCAGCAAGGATTGCGGCGTGGTTCGCGAGGGCACCTGCGGGGCCAGACCCAGCGCATCCGGTGC  
AGGGTGCCTGCAACTGGAAGAAGGAGTTGGAGCCGACTGCAAGTACAAGTTTGAGAACTGGGGTGCCT  
GTGATGGGGGCACAGGCACCAAAGTCCGCCAAGGCACCCTGAAGAAGGGCGCTACAATGCTCAGTGCCA  
GGAGACCATCCGCGTCACCAAGCCCTGCACCCCAAGACCAAAGCAAAGCCAAAGCAAAGAAAGGGAAG  
GGAAAGGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC221818 protein sequence  
**Red=Cloning site Green=Tags(s)**

MQHRGFLLLTLALLALTSAVAKKKDKVKKGGPGSECAEWAWGPCTPSSKDCGVGFREGTCGAQTQRIRC  
RVPCNWKKEFGADCKYKFENWGACDGGTGTKVRQGLKKARYNAQCQETIRVTKPCTPKTKAKAKAKGK  
GKD

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

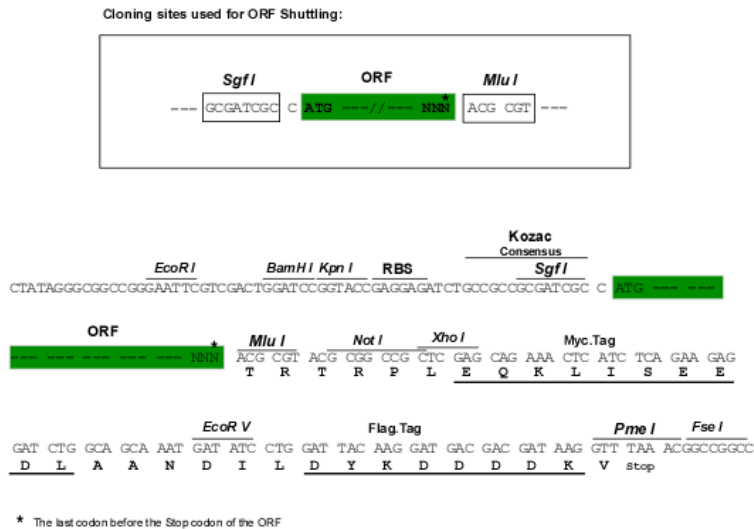
**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6422\\_d08.zip](https://cdn.origene.com/chromatograms/mk6422_d08.zip)



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**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001012334

**ORF Size:** 429 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:**

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 Size:** 1015 bp

**RefSeq ORF:** 432 bp

**Locus ID:** 4192

UniProt ID: [P21741](#)

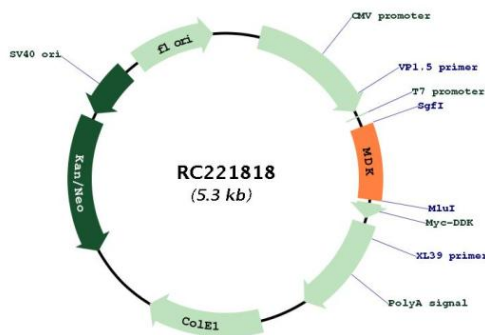
Cytogenetics: 11p11.2

Protein Families: Druggable Genome, Secreted Protein, Transmembrane

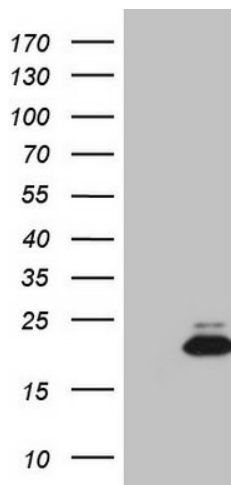
MW: 15.6 kDa

Gene Summary: This gene encodes a member of a small family of secreted growth factors that binds heparin and responds to retinoic acid. The encoded protein promotes cell growth, migration, and angiogenesis, in particular during tumorigenesis. This gene has been targeted as a therapeutic for a variety of different disorders. Alternatively spliced transcript variants encoding multiple isoforms have been observed. [provided by RefSeq, Jul 2012]

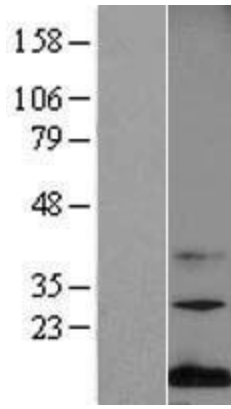
### Product images:



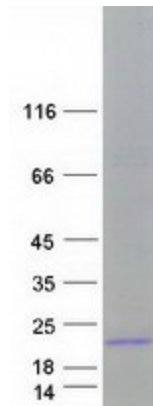
Circular map for RC221818



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MDK (Cat# RC221818, 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-MDK (Cat# [TA807679])(1:2000). Positive lysates [LY425316] (100ug) and [LC425316] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY423328]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221818 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MDK protein (Cat# [TP321818]). The protein was produced from HEK293T cells transfected with MDK cDNA clone (Cat# RC221818) using MegaTran 2.0 (Cat# [TT210002]).