

## Product datasheet for RC204576

### Vinculin (VCL) (NM\_003373) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Vinculin (VCL) (NM_003373) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	VCL
Synonyms:	CMD1W; CMH15; HEL114; MV; MVCL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204576 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCAGTGTTCATACGCGCACGATCGAGAGCATCCTGGAGCCGGTGGCACAGCAGATCTCCACCTGG  
TGATAATGCACGAGGAGGGCGAGGTGGACGGCAAAGCCATTCTGACCTCACCGGCCCGTGGCCGCGCT  
GCAGGGCGCCGTAGCAACCTCGTCCGGTTGGAAAAGAGACTGTTCAAACCACTGAGGATCAGATTTTG  
AAGAGAGATATGCCACCAGCATTATTAAGTTGAGAATGCTTGACCAAGCTTGTCCAGGCAGCTCAGA  
TGCTTCAGTCAGACCTTACTCAGTGCCTGCTCGAGATTATCTAATTGATGGGTCAAGGGGCATCCTCTC  
TGGAACATCAGACCTGCTCCTTACCTTCGATGAGGCTGAGGTCCGTAATAATTATTAGAGTTTGCAAAGGA  
ATTTTGAATATCTTACAGTGGCAGAGGTGGTGGAGACTATGGAAGATTTGGTCACTTACACAAAGAATC  
TTGGGCCAGGAATGACTAAGATGGCCAAGATGATTGACGAGAGACAGCAGGAGCTCACTCACCGAGGCA  
CCGAGTGATGTTGGTGAACCGTGAACACCGTGAAGAGTTGCTGCCAGTTCTCATTTCAGCTATGAAG  
ATTTTGTAACTAAAACTCAAAAACCAAGGCATAGAGGAAGCTTTAAAAATCGCAATTTTACTC  
TAGAAAAATGAGTGCTGAAATTAATGAGATAATTCGTGTGTTACAACCTCACCTCTGGGATGAAGATGC  
CTGGGCCAGCAAGGACTGAAGCCATGAAGAGAGCATTGGCCTCCATAGACTCCAACTGAACAGGCGC  
AAAGTTGGCTCCGTGACCCTAGTGCCTCCCGAGGGATGCTGGTGAGCAGGCCATCAGACAGATCTTAG  
ATGAAGCTGGAAGTTGGTGAACCTGTGTCAGGCAAAGAAGCAGGAGATTCTGGGAACCTGCAAAAT  
GCTAGGGCAGATGACTGATCAAGTGGCTGACCTCCGTGCCAGAGGACAAGGATCCTCACCGTGGCCATG  
CAGAAAGCTCAGCAGGTATCTCAGGGTCTGGATGTGCTCACAGCAAAAGTGGAAAATGCAGCTCGCAAGC  
TGGAAGCCATGACCAACTCAAAGCAGAGCATTGCAAGAAGATCGATGCTGCTCAGAACTGGCTTGAGAA  
TCCAAATGGTGGACCGGAAGGAGAAGAGCAGATTGAGGTGCTTTGGCTGAAGCTCGGAAAATAGCAGAA  
TTATGTGATGATCCTAAAGAAAGAGATGACATTCTACGTTCCCTTGGGAAAATATCTGCTGACTTCTA  
AATTAGCAGATCTACGAAGACAGGGGAAAGGAGATTCTCCAGAGGCTCGAGCCTTGCCAAACAGGTGGC  
CACGGCCCTGCAGAACCTGCAGACCAAAACCAACCGGGCTGTGGCAACAGCAGACCGGCCAAAGCAGCT



GTACACCTTGAGGGCAAGATTGAGCAAGCACAGCGGTGGATTGATAATCCCACAGTGGATGACCGTGGAG  
 TCGGTCAGGCTGCCATCCGGGGCTTGTGGCCGAGGGCATCGTCTGGCTAATGTTATGATGGGGCCTTA  
 TCGGCAAGATCTTCTCGCCAAGTGTGACCGAGTGGACCAGCTGACAGCCCAGCTGGCTGACCTGGCTGCC  
 AGAGGGGAAGGGGAGAGTCTCAGGCACGAGCACTTGCATCTCAGCTCCAAGACTCCTTAAAGGATCTAA  
 AAGCTCGGATGCAGGAGGCCATGACTCAGGAAGTGCAGATGTTTTACGCGATACCACAACCTCCCATCAA  
 GCTGTTGGCAGTGGCAGCCACGGCGCTCCTGATGCGCCTAACAGGGAAGAGTATTTGATGAGAGGGCA  
 GCTAACTTGA AAAACATT CAGGAAAGCTTGGTGTCTACGGCCGAGAAGGGCGCTGCGGTTGGTACTGCTA  
 ATAAATCAACAGTGGAAAGCATT CAGGCTCAGTGAAGACGGCCGAGA ACTCACACCCAGGTGGTCTC  
 GGCTGCTCGTATCTTACTTAGGAACTTGAAAATCAAGCTGCTTATGAACATTTT GAGACCATGAAGAAC  
 CAGTGGATCGATAATGTTGAAAAATGACAGGGCTGGTGGACGAAGCCATTGATACCAAATCTCTGTTGG  
 ATGCTTCAGAAGAAGCAATTA AAAAGACTGGACAAGTGAAGGTAGCTATGGCCAACATT CAGCCTCA  
 GATGCTGGTTGCTGGGGCAACAGTATTGCTCGTGGGCCAACCGGATCCTGCTGGTGGCTAAGAGGGAG  
 GTGGAGAATCCGAGGATCCCAAGTCCGTGAGGCTGTGAAAGCTGCCTCTGATGAATTGAGCAAAACCA  
 TCTCCCGATGGTATGGATGCAAAAGCTGTGGCTGGAACATTTCCGACCTGGACTGCAAAAGAGCTT  
 CCTGGACTCAGGATATCGGATCCTGGGAGCTGTGGCCAAGGT CAGAGAAGCCTTCCAACCTCAGGAGCCT  
 GACTTCCCGCCGCTCCACCAGACTTGAACAACCTCCGACTAACAGATGAGCTTGCCTCTCCCAAACAC  
 CTCTGCCTGAAGGTGAGGTCCCTCCACCTAGGCCTCCACCACCAGAGGAAAAGGATGAAGAGTTCCTTGA  
 GCAGAAGGCCGGGGAGGTGATTAACCAGCAATGATGATGGCTGCCAGACAGCTCCATGATGAAGCTCGC  
 AAATGGTCCAGCAAGGGCAATGACATCATTGCAGCAGCCAAGCGCATGGCTCTGCTGATGGCTGAGATGT  
 CTCGGCTGGTAAGAGGGGGCAGTGGTACCAAGCGGGCACTCATT CAGTGTCCAAGGACATCGCCAAGGC  
 CTCAGATGAGGTGACTCGGTTGGCCAAGGAGTTGCCAAGCAGTGCACAGATAAACGGATTAGAACCAAC  
 CTCTTACAGGTATGTGAGCGAATCCCAACCATAAGCACCAGCTCAAAAATCTGTCCACAGTGAAGGCCA  
 CCATGCTGGCCGACCAACATCAGTGTGAGGAGTCTGAGCAGGCCACAGAGATGCTGGTTCACAATGC  
 CCAGAACCTCATGCAGTCTGTGAAGGAGACTGTGCGGGAAGCTGAAGCTGCTTCAATCAAAATTCGAACA  
 GATGCTGGATTTACTGCGCTGGGTTAGAAAGACTCCCTGTTACCAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC204576 protein sequence  
 Red=Cloning site Green=Tags(s)

MPVFHTRTIESILEPVAQQISHLVIMHEEGEVDGKAIPDLTAPVAAVQAAYSNLVRVGKETVQTTEQIL  
 KRDMPPAFIKVENACTKL VQAAQMLQSDPYSVPARDYLIDGSRGILSGTSDLLLTFDEAEVRKIIRVCKG  
 ILEYLTVAEVETMEDLVTYTKNLGPGMTKMAKMIDERQQELTHQEHRVMLVNSMNTVKELLPVLISAMK  
 IFVTTKNSKNQIEEALKNRNFTLEKMSAEINEIIRVLQLTSWEDAWASKDTEAMKRALASIDSKLNQA  
 KGWLRDPSASPGDAGEQAIRQILDEAGKVGELCAGKERREILGTCKMLGQMTDQVADLRARGQSSPVAM  
 QKAQQVSQGLDVL TAKVENAARKLEAMTNSKQSI AKKIDAAQNWLADPNGGPEGEEQIRGALAEARKIAE  
 LCDDPKERDDILRSLGEISALTSKLADLRRQGGDSPEARALAKQVATALQNLQTKTNRAVANSRPAKAA  
 VHLEGKIEQAQRWIDNPTVDDRGVGQAIRGLVAEGHRLANVMMGPYRQDLLAKCDRVDQLTAQLADLAA  
 RGEESPQARALASQLQDSLKDLKARMQEAMTQEVSDFSDTTPIKLLAVAATAPPDAPNREEVFDERA  
 ANFENHSGKLGATAEKAAAVGTANKSTVEGIQASVKTARELTPQVVSAARILLRNPNGQAAYEHFETMKN  
 QWIDNVEKMTGLVDEAIDTKSLLDASEEAIKKDLDKCKVAMANIQPQMLVAGATSIARRANRILLVAKRE  
 VENSEDPKRFREAVKAASDEL SKTISPMVMDAKAVAGNISDPGLQKSF LDSGYRILGAVAKVREAFQPQEP  
 DFPPPPDLEQLRLTDELAPPKPLPEGEVPPRPPPEEKDEEFPEQKAGEVINQPMMAARQLHDEAR  
 KWSSKNDIIAAAKRMALLMAEMSRLVRGGSGTKRALIQCAKDI AKASDEVTRLAKEVAKQCTDKRIRTN  
 LLQVCERIPTISTQLKILSTVKATMLGR TNISDEESEQATEMLVHNAQNLMSVKETVREAEAAASIKIRT  
 DAGFTLRWRKTPWYQ

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

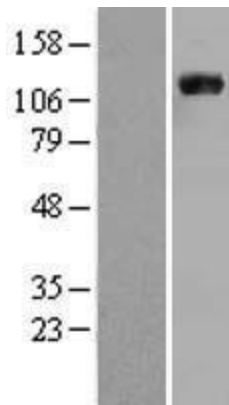
[https://cdn.origene.com/chromatograms/mk6261\\_f03.zip](https://cdn.origene.com/chromatograms/mk6261_f03.zip)



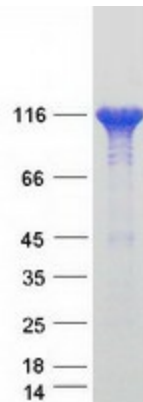
<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_003373.4</a>
<b>RefSeq Size:</b>	5443 bp
<b>RefSeq ORF:</b>	3201 bp
<b>Locus ID:</b>	7414
<b>UniProt ID:</b>	<a href="#">P18206</a>
<b>Cytogenetics:</b>	10q22.2
<b>Domains:</b>	Vinculin
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Adherens junction, Focal adhesion, Leukocyte transendothelial migration, Regulation of actin cytoskeleton
<b>MW:</b>	116.7 kDa

**Gene Summary:**

Vinculin is a cytoskeletal protein associated with cell-cell and cell-matrix junctions, where it is thought to function as one of several interacting proteins involved in anchoring F-actin to the membrane. Defects in VCL are the cause of cardiomyopathy dilated type 1W. Dilated cardiomyopathy is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Multiple alternatively spliced transcript variants have been found for this gene, but the biological validity of some variants has not been determined. [provided by RefSeq, Jul 2008]

**Product images:**

Western blot validation of overexpression lysate (Cat# [LY418728]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204576 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified VCL protein (Cat# [TP304576]). The protein was produced from HEK293T cells transfected with VCL cDNA clone (Cat# RC204576) using MegaTran 2.0 (Cat# [TT210002]).