OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC217720

MYBPC3 (NM_000256) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MYBPC3 (NM_000256) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MYBPC3
Synonyms:	CMD1MM; CMH4; cMyBP-C; FHC; LVNC10; MYBP-C
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC217720 representing NM_000256
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCTGAGCCGGGGAAGAAGCCAGTCTCAGCTTTTAGCAAGAAGCCACGGTCAGTGGAAGTGGCCGCAG
GCAGCCCTGCCGTGTTCGAGGCCGAGACAGAGCGGGCAGGAGTGAAGGTGCGCTGGCAGCGCGGAGGCAG
TGACATCAGCGCCAGCAACAAGTACGGCCTGGCCACAGAGGGCACACGGCATACGCTGACAGTGCGGGAA
GTGGGCCCTGCCGACCAGGGATCTTACGCAGTCATTGCTGGCTCCTCCAAGGTCAAGTTCGACCTCAAGG
TCATAGAGGCAGAGAAGGCAGAGCCCATGCTGGCCCCTGCCCCTGCCCCTGCTGAGGCCACTGGAGCCCC
TGGAGAAGCCCCGGCCCCAGCCGCTGAGCTGGGAGAAAGTGCCCCAAGTCCCAAAGGGTCAAGCTCAGCA
GCTCTCAATGGTCCTACCCCTGGAGCCCCCGATGACCCCATTGGCCTCTTCGTGATGCGGCCACAGGATG
GCGAGGTGACCGTGGGTGGCAGCATCACCTTCTCAGCCCGCGTGGCCGGCGCCAGCCTCCTGAAGCCGCC
TGTGGTCAAGTGGTTCAAGGGCAAATGGGTGGACCTGAGCAGCAAGGTGGGCCAGCACCTGCAGCTGCAC
GACAGCTACGACCGCGCCAGCAAGGTCTATCTGTTCGAGCTGCACATCACCGATGCCCAGCCTGCCTTCA
CTGGCAGCTACCGCTGTGAGGTGTCCACCAAGGACAAATTTGACTGCTCCAACTTCAATCTCACTGTCCA
CGAGGCCATGGGCACCGGAGACCTGGACCTCCTATCAGCCTTCCGCCGCACGAGCCTGGCTGGAGGTGGT
CGGCGGATCAGTGATAGCCATGAGGACACTGGGATTCTGGACTTCAGCTCACTGCTGAAAAAGAGAGACA
GTTTCCGGACCCCGAGGGACTCGAAGCTGGAGGCACCAGCAGAGGAGGACGTGTGGGAGATCCTACGGCA
GGCACCCCCATCTGAGTACGAGCGCATCGCCTTCCAGTACGGCGTCACTGACCTGCGCGGCATGCTAAAG
AGGCTCAAGGGCATGAGGCGCGATGAGAAGAAGAGCACAGCCTTTCAGAAGAAGCTGGAGCCGGCCTACC
AGGTGAGCAAAGGCCACAAGATCCGGCTGACCGTGGAACTGGCTGACCATGACGCTGAGGTCAAATGGCT
CAAGAATGGCCAGGAGATCCAGATGAGCGGCAGCAAGTACATCTTTGAGTCCATCGGTGCCAAGCGTACC
CTGACCATCAGCCAGTGCTCATTGGCGGACGACGCAGCCTACCAGTGCGTGGTGGGTGGCGAGAAGTGTA
GCACGGAGCTCTTTGTGAAAGAGCCCCCTGTGCTCATCACGCGCCCCTTGGAGGACCAGCTGGTGATGGT
GGGGCAGCGGGTGGAGTTTGAGTGTGAAGTATCGGAGGAGGGGGCGCAAGTCAAATGGCTGAAGGACGGG

View online »

GTGGAGCTGACCCGGGAGGAGACCTTCAAATACCGGTTCAAGAAGGACGGGCAGAGACACCACCTGATCA
TCAACGAGGCCATGCTGGAGGACGCGGGGCACTATGCACTGTGCACTAGCGGGGGCCAGGCGCTGGCTGA
GCTCATTGTGCAGGAAAAGAAGCTGGAGGTGTACCAGAGCATCGCAGACCTGATGGTGGGCGCAAAGGAC
CAGGCGGTGTTCAAATGTGAGGTCTCAGATGAGAATGTTCGGGGTGTGTGGCTGAAGAATGGGAAGGAGC
TGGTGCCCGACAGCCGCATAAAGGTGTCCCACATCGGGCGGGTCCACAAACTGACCATTGACGACGTCAC
ACCTGCCGACGAGGCTGACTACAGCTTTGTGCCCGAGGGCTTCGCCTGCAACCTGTCAGCCAAGCTCCAC
TTCATGGAGGTCAAGATTGACTTCGTACCCAGGCAGGAACCTCCCAAGATCCACCTGGACTGCCCAGGCC
GCATACCAGACACCATTGTGGTTGTAGCTGGAAATAAGCTACGTCTGGACGTCCCTATCTCTGGGGACCC
TGCTCCCACTGTGATCTGGCAGAAGGCTATCACGCAGGGGAATAAGGCCCCAGCCAGGCCAGCCCCAGAT
GCCCCAGAGGACACAGGTGACAGCGATGAGTGGGTGTTTGACAAGAAGCTGCTGTGTGAGACCGAGGGCC
GGGTCCGCGTGGAGACCACCAAGGACCGCAGCATCTTCACGGTCGAGGGGGCAGAGAAGGAAGATGAGGG
CGTCTACACGGTCACAGTGAAGAACCCTGTGGGCGAGGACCAGGTCAACCTCACAGTCAAGGTCATCGAC
GTGCCAGACGCACCTGCGGCCCCCAAGATCAGCAACGTGGGAGAGGACTCCTGCACAGTACAGTGGGAGC
CGCCTGCCTACGATGGCGGGCAGCCCATCCTGGGCTACATCCTGGAGCGCAAGAAGAAGAAGAGCTACCG
GTGGATGCGGCTGAACTTCGACCTGATTCAGGAGCTGAGTCATGAAGCGCGGCGCATGATCGAGGGCGTG
GTGTACGAGATGCGCGTCTACGCGGTCAACGCCATCGGCATGTCCAGGCCCAGCCCTGCCTCCCAGCCCT
TCATGCCTATCGGTCCCCCCAGCGAACCCACCCACCTGGCAGTAGAGGACGTCTCTGACACCACGGTCTC
CCTCAAGTGGCGGCCCCCAGAGCGCGTGGGAGCAGGAGGCCTGGATGGCTACAGCGTGGAGTACTGCCCA
GAGGGCTGCTCAGAGTGGGTGGCTGCCCTGCAGGGGCTGACAGAGCACACATCGATACTGGTGAAGGACC
TGCCCACGGGGGCCCGGCTGCTTTTCCGAGTGCGGGCACACAATATGGCAGGGCCTGGAGCCCCTGTTAC
CACCACGGAGCCGGTGACAGTGCAGGAGATCCTGCAACGGCCACGGCTTCAGCTGCCCAGGCACCTGCGC
CAGACCATTCAGAAGAAGGTCGGGGAGCCTGTGAACCTTCTCATCCCTTTCCAGGGCAAGCCCCGGCCTC
AGGTGACCTGGACCAAAGAGGGGCAGCCCCTGGCAGGCGAGGAGGTGAGCATCCGCAACAGCCCCACAGA
CACCATCCTGTTCATCCGGGCCGCTCGCCGCGTGCATTCAGGCACTTACCAGGTGACGGTGCGCATTGAG
AACATGGAGGACAAGGCCACGCTGGTGCTGCAGGTTGTTGACAAGCCAAGTCCTCCCCAGGATCTCCGGG
TGACTGACGCCTGGGGTCTTAATGTGGCTCTGGAGTGGAAGCCACCCCAGGATGTCGGCAACACGGAGCT
CTGGGGGTACACAGTGCAGAAAGCCGACAAGAAGACCATGGAGTGGTTCACCGTCTTGGAGCATTACCGC
CGCACCCACTGCGTGGTGCCAGAGCTCATCATTGGCAATGGCTACTACTTCCGCGTCTTCAGCCAGAATA
TGGTTGGCTTTAGTGACAGAGCGGCCACCACCAAGGAGCCCGTCTTTATCCCCAGACCAGGCATCACCTA
TGAGCCACCCAACTATAAGGCCCTGGACTTCTCCGAGGCCCCAAGCTTCACCCAGCCCCTGGTGAACCGC
TCGGTCATCGCGGGCTACACTGCTATGCTCTGCTGTGCTGTCCGGGGTAGCCCCAAGCCCAAGATTTCCT
GGTTCAAGAATGGCCTGGACCTGGGAGAAGACGCCCGCTTCCGCATGTTCAGCAAGCAGGGAGTGTTGAC
TCTGGAGATTAGAAAGCCCTGCCCCTTTGACGGGGGCATCTATGTCTGCAGGGCCACCAACTTACAGGGC
GAGGCACGGTGTGAGTGCCGCCTGGAGGTGCGAGTGCCTCAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC217720 representing NM_000256
Red=Cloning site Green=Tags(s)

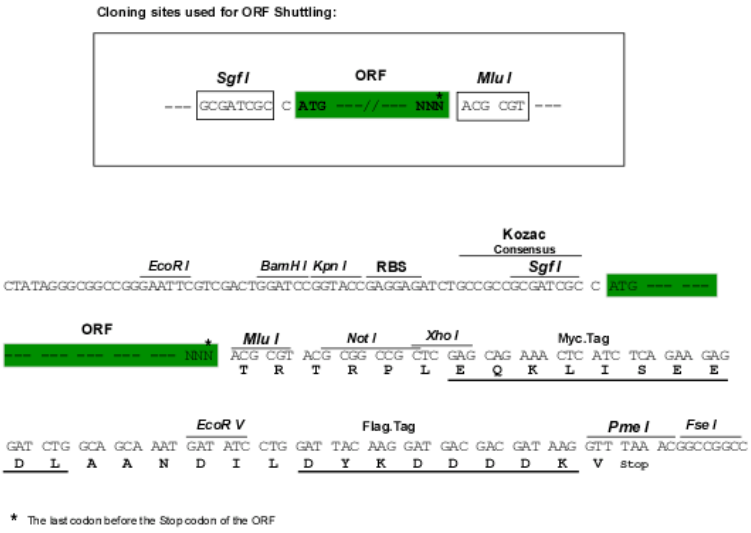
MPEPGKKPVSAFSKKPRSVEVAAGSPAVFEAETERAGVKVRWQRGGSDISASNKYGLATEGTRHTLTVRE
VGPADQGSYAVIAGSSKVKFDLKVIEAEKAEPMLAPAPAPAEATGAPGEAPAPAAELGESAPSPKGSSSA
ALNGPTPGAPDDPIGLFVMRPQDGEVTVGGSITFSARVAGASLLKPPVVKWFKGKWVDLSSKVGQHLQLH
DSYDRASKVYLFELHITDAQPAFTGSYRCEVSTKDKFDCSNFNLTVHEAMGTGDLDLLSAFRRTSLAGGG
RRISDSHEDTGILDFSSLLKKRDSFRTPRDSKLEAPAEEDVWEILRQAPPSEYERIAFQYGVTDLRGMLK
RLKGMRRDEKKSTAFQKKLEPAYQVSKGHKIRLTVELADHDAEVKWLKNGQEIQMSGSKYIFESIGAKRT
LTISQCSLADDAAYQCVVGGEKCSTELFVKEPPVLITRPLEDQLVMVGQRVEFECEVSEEGAQVKWLKDG
VELTREETFKYRFKKDGQRHHLIINEAMLEDAGHYALCTSGGQALAELIVQEKKLEVYQSIADLMVGAKD
QAVFKCEVSDENVRGVWLKNGKELVPDSRIKVSHIGRVHKLTIDDVTPADEADYSFVPEGFACNLSAKLH
FMEVKIDFVPRQEPPKIHLDCPGRIPDTIVVVAGNKLRLDVPISGDPAPTVIWQKAITQGNKAPARPAPD
APEDTGDSDEWVFDKKLLCETEGRVRVETTKDRSIFTVEGAEKEDEGVYTVTVKNPVGEDQVNLTVKVID
VPDAPAAPKISNVGEDSCTVQWEPPAYDGGQPILGYILERKKKKSYRWMRLNFDLIQELSHEARRMIEGV
VYEMRVYAVNAIGMSRPSPASQPFMPIGPPSEPTHLAVEDVSDTTVSLKWRPPERVGAGGLDGYSVEYCP
EGCSEWVAALQGLTEHTSILVKDLPTGARLLFRVRAHNMAGPGAPVTTTEPVTVQEILQRPRLQLPRHLR
QTIQKKVGEPVNLLIPFQGKPRPQVTWTKEGQPLAGEEVSIRNSPTDTILFIRAARRVHSGTYQVTVRIE
NMEDKATLVLQVVDKPSPPQDLRVTDAWGLNVALEWKPPQDVGNTELWGYTVQKADKKTMEWFTVLEHYR
RTHCVVPELIIGNGYYFRVFSQNMVGFSDRAATTKEPVFIPRPGITYEPPNYKALDFSEAPSFTQPLVNR
SVIAGYTAMLCCAVRGSPKPKISWFKNGLDLGEDARFRMFSKQGVLTLEIRKPCPFDGGIYVCRATNLQG
EARCECRLEVRVPQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8016_d08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



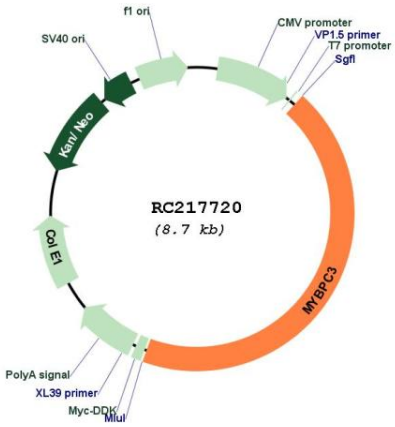
ACCN: NM_000256

ORF Size: 3822 bp

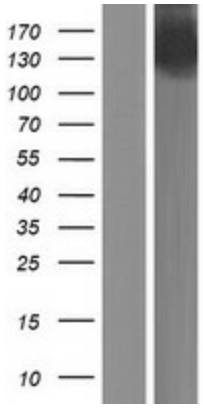
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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:	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_000256.3
RefSeq Size:	4200 bp
RefSeq ORF:	3825 bp
Locus ID:	4607
UniProt ID:	Q14896
Cytogenetics:	11p11.2
Protein Families:	Druggable Genome
Protein Pathways:	Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM)
MW:	140.8 kDa

Gene Summary: MYBPC3 encodes the cardiac isoform of myosin-binding protein C. Myosin-binding protein C is a myosin-associated protein found in the cross-bridge-bearing zone (C region) of A bands in striated muscle. MYBPC3, the cardiac isoform, is expressed exclussively in heart muscle. Regulatory phosphorylation of the cardiac isoform in vivo by cAMP-dependent protein kinase (PKA) upon adrenergic stimulation may be linked to modulation of cardiac contraction. Mutations in MYBPC3 are one cause of familial hypertrophic cardiomyopathy. [provided by RefSeq, Jul 2008]

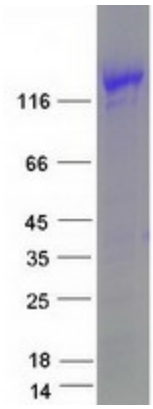
Product images:



Circular map for RC217720



Western blot validation of overexpression lysate (Cat# [LY424835]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217720 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MYBPC3 protein (Cat# [TP317720]). The protein was produced from HEK293T cells transfected with MYBPC3 cDNA clone (Cat# RC217720) using MegaTran 2.0 (Cat# [TT210002]).