

Product datasheet for **RC203643**

beta Actin (ACTB) (NM_001101) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids

Tag: Myc-DDK

Symbol: beta Actin

Synonyms: BRWS1; PS1TP5BP1

Mammalian Cell Selection: Neomycin

Vector: pCMV6-Entry (PS100001)

E. coli Selection: Kanamycin (25 ug/mL)

ORF Nucleotide Sequence: >RC203643 representing NM_001101
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGATGATGATATCGCCGCGCTCGTCGTCGACAACGGCTCCGGCATGTGCAAGGCCGGCTTCGCGGGCG
ACGATGCCCCCGGGCGCTCTTCCCTCCATCGTGGGGCGCCCCAGGCACCGAGGGCGTGATGGTGGGCAT
GGGTGAGAAGGATTCTATGTGGGCGACGAGGCCAGAGCAAGAGAGGCATCCTCACCTGAAGTACCCC
ATCGAGCACGGCATCGTCACCAACTGGGACGACATGGAGAAAATCTGGCACCACACCTTCTACAATGAGC
TGCGTGTGGCTCCCGAGGAGCACCCGTGCTGCTGACCGAGGCCCCCTGAACCCCAAGGCCAACCGCGA
GAAGATGACCCAGATCATGTTTGAGACCTTCAACACCCAGCCATGTACGTTGCTATCCAGGCTGTGCTA
TCCCTGTACGCCTCTGGCGTACCACTGGCATCGTGATGGACTCCGGTGACGGGGTACCCACACTGTGC
CCATCTACGAGGGGTATGCCCTCCCCATGCCATCCTGCGTCTGGACCTGGCTGGCCGGGACCTGACTGA
CTACCTCATGAAGATCCTCACCGAGCGGGCTACAGCTTACCACCACGGCCGAGCGGGAATCGTGCGT
GACATTAAGGAGAAGCTGTGCTACGTGCGCCTGGACTTCGAGCAAGAGATGGCCACGGCTGCTTCCAGCT
CCTCCCTGGAGAAGAGCTACGAGCTGCCTGACGGCCAGGTCATCACCATTGGCAATGAGCGGTTCCGCTG
CCCTGAGGCACTTCTCAGCCTTCTTCTGGGCATGGAGTCTGTGGCATCCACGAACTACCTTCAAC
TCCATCATGAAGTGTGACGTGGACATCCGCAAGACCTGTACGCCAACACAGTGTGTCTGGCGGCACCA
CCATGTACCCTGGCATTGCCGACAGGATGCAGAAAGGAGTCACTGCCCTGGCACCCAGCACAATGAAGAT
CAAGATCATTGCTCCTCTGAGCGCAAGTACTCCGTGTGGATCGCGGGCTCCATCCTGGCCTCGCTGTCC
ACCTTCCAGCAGATGTGGATCAGCAAGCAGGAGTATGACGAGTCCGGCCCTCCATCGTCCACCGCAAAAT
GCTTC

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC203643 representing NM_001101

Red=Cloning site Green=Tags(s)

MDDDI AALVVDNGSGMCKAGFAGDDAPRAVFP SIVGRPRHQGV MVMGMGQKDSYVGDEAQS KRGI LTLKYP
 IEHGI VTNWDDMEKIWHHTFYNELRV APEEHPVLLTEAPLNPKANREKMTQIMFETFNTPAMYVAIQAVL
 SLYASGR TTGI VMDSGDGVTHTPVIYEGALPHAI LRLDLA GRDLTDYLMKILTERGYSFTTTAEREIVR
 DIKEKLCYVALDFEQEMATAASSSSLEKSYELPDGQVITIGNERFRCP EALFQPSFLGMESCGIHETTFN
 SIMKDWSDIRKDLANTVL SGGTTMYPG IADRMQKEITALAPSTMKIKIIAPPERKYSVWIGGSILASLS
 TFQOMVSKOEYDESGPSIVHRKCF

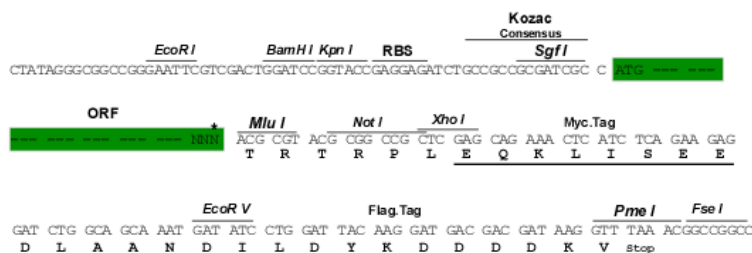
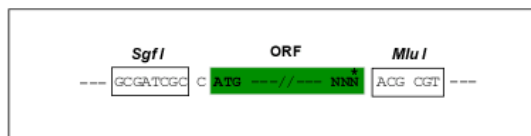
TRTRPLEOKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3047_b09.zip

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM 001101

ORF Size: 1125 bp

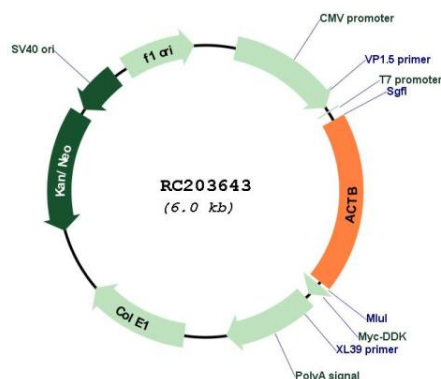
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

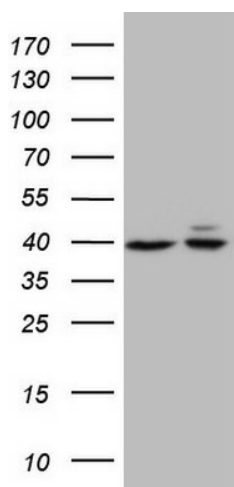
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<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:	<u>NM_001101.5</u>
RefSeq Size:	1793 bp
RefSeq ORF:	1128 bp
Locus ID:	60
UniProt ID:	<u>P60709</u>
Cytogenetics:	7p22.1
Domains:	ACTIN
Protein Families:	ES Cell Differentiation/IPS
Protein Pathways:	Adherens junction, Arrhythmogenic right ventricular cardiomyopathy (ARVC), Dilated cardiomyopathy, Focal adhesion, Hypertrophic cardiomyopathy (HCM), Leukocyte transendothelial migration, Pathogenic Escherichia coli infection, Regulation of actin cytoskeleton, Tight junction, Vibrio cholerae infection, Viral myocarditis
MW:	41.6 kDa
Gene Summary:	<p>This gene encodes one of six different actin proteins. Actins are highly conserved proteins that are involved in cell motility, structure, integrity, and intercellular signaling. The encoded protein is a major constituent of the contractile apparatus and one of the two nonmuscle cytoskeletal actins that are ubiquitously expressed. Mutations in this gene cause Baraitser-Winter syndrome 1, which is characterized by intellectual disability with a distinctive facial appearance in human patients. Numerous pseudogenes of this gene have been identified throughout the human genome. [provided by RefSeq, Aug 2017]</p>

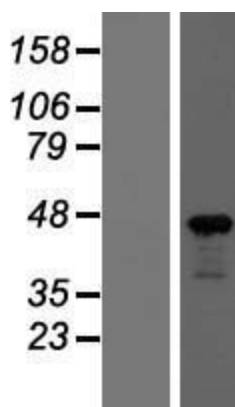
Product images:



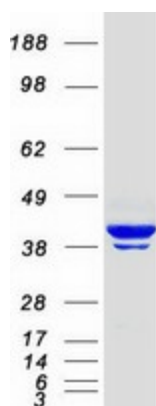
Circular map for RC203643



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ACTB (Cat# RC203643, 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-ACTB antibody (Cat# [TA890010]). Positive lysates [LY420311] (100ug) and [LC420311] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY420311]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203643 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ACTB protein (Cat# [TP303643]). The protein was produced from HEK293T cells transfected with ACTB cDNA clone (Cat# RC203643) using MegaTran 2.0 (Cat# [TT210002]).