

Product datasheet for **MR227480**

Ctnnb1 (NM_007614) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ctnnb1 (NM_007614) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ctnnb1
Synonyms:	Bfc; Cat; Catnb; Mesc
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR227480 representing NM_007614
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCTACTCAAGCTGACCTGATGGAGTTGGACATGGCCATGGAGCCGGACAGAAAAGCTGCTGTACGCC
 ACTGGCAGCAGCAGTCTTACTTGGATTCTGGAATCCATTCGGTGCCACCACCACAGCTCCTTCCCTGAG
 TGGCAAGGGCAACCCTGAGGAAGAAGATGTTGACACCTCCAAGTCCTTTATGAATGGGAGCAAGGCTTT
 TCCAGTCCTTACGCAAGAGCAAGTAGCTGATATTGACGGGCAGTATGCAATGACTAGGGCTCAGAGGG
 TCCGAGCTGCCATGTTCCCTGAGACGCTAGATGAGGGCATGCAGATCCCATCCACGCAGTTTGACGCTGC
 TCATCCCCTAATGTCCAGCGCTTGGCTGAACCATCACAGATGTTGAAACATGCAGTTGTCAATTTGATT
 AACTATCAGGATGACGCGGAACCTGCCACACGTGCAATTCCTGAGCTGACAAAACCTGCTAAACGATGAGG
 ACCAGGTGGTAGTTAATAAAGCTGCTGTTATGGTCCATCAGCTTCCAAAAAGGAAGCTTCCAGACATGC
 CATCATGCGCTCCCCTCAGATGGTGTCTGCCATTGTACGCACCATGCAGAATACAATGATGTAGAGACA
 GCTCGTTGTAAGTCTGGGACTCTGCACAACCTTCTCACCACCGGAGGGCTTGCTGGCCATCTTTAAGT
 CTGGTGGCATCCCAGCGCTGGTGAATGCTTGGGTACCAAGTGGATTCTGTACTGTTCTACGCCATCAC
 GACTGACATAATCTCCTGCTCCATCAGGAAGGAGCTAAAATGGCAGTGCCTAGCTGGTGGACTGCAG
 AAAATGGTTGCTTGGCTCAACAAAAACAACGTGAAATCTTGGCTATTACAACAGACTGCCTCAGATCT
 TAGCTTATGGCAATCAAGAGAGCAAGCTCATCATTCTGGCCAGTGGTGGACCCCAAGCCTTAGTAAACAT
 AATGAGGACCTACACTTATGAGAAGCTTCTGTGGACCACAAGCAGAGTGTGAAGGTGCTGTCTGTCTGC
 TCTAGCAACAAGCCGGCATTGTAGAAGCTGGTGGATGCAGGCACTGGGCTTCATCTGACAGACCCAA
 GTCAGCGACTTGTCAAACCTGCTTTGGACTCTCAGAAACCTTTCAGATGCAGCGACTAAGCAGGAAG
 GATGGAAGGCCTCCTTGGGACTCTAGTGCAGCTTCTGGGTTCCGATGATATAAATGTGGTACCTGTGCA
 GCTGGAATTCTCTCTAACCTCACTTGAATAATTACAAAAACAAGATGATGGTGTGCCAAGTGGGTGGCA
 TAGAGGCTCTGTACGCACCGCTCCTTCGTGCTGGTACAGGGAAGACATCACTGAGCCTGCCATCTGTGC
 TCTTCGTATCTGACCAGCCGGCATCAGGAAGCCGAGATGGCCAGAATGCCGTTCCGCTTCAATATGGA
 CTGCCTGTTGTGGTTAACTCCTGCACCCACCATCCCCTGGCCTCTGATAAAGGCAACTGTTGGATTGA
 TTCGAAACCTTGGCCTTGGCCAGCAAATCATGCGCTTTCGGGAAACAGGGTGTATTCCACGACTAGT
 TCAGCTGCTTGTACGAGCACATCAGGACACCCAACGGCGCACCTCCATGGGTGGAACGCAGCAGCAGTTT
 GTGGAGGGCGTGCATGGAGGAGATAGTAGAAGGTGTACTGGAGCTCTCCACATCCTTGTCTCGGACG
 TTCACAACCGGATTGTAATCCGAGGACTCAATACCATTCCATTGTTTGTGCAATTGCTTTATTCTCCCAT
 TGAAAATATCAAAGAGTAGCTGCAGGGTCTCTGTGAACCTGCTCAGGACAAGGAGGCTGCAGAGGCC
 ATTGAAGCTGAGGGAGCCACAGCTCCCCTGACAGAGTACTCCACTCCAGGAATGAAGGCGTGGCAACAT
 ACGCAGCTGCTGTCTTATCCGAATGTCTGAGGACAAGCCACAGGATTACAAGAAGCGGCTTTCAGTCGA
 GCTGACCAGTTCCTCTCAGGACAGAGCCAATGGCTTGGAAATGAGACTGCAGATCTTGGACTGGACATT
 GGTGCCAGGGGAGAAGCCCTTGGATATCGCCAGGATGATCCCAGCTACCGTCTTTTCACTCTGGTGGAT
 ACGGCCAGGATGCCTTGGGATGGACCTATGATGGAGCATGAGATGGGTGGCCACCACCCTGGTGTGA
 CTATCCAGTTGATGGGCTGCCTGATCTGGGACACGCCAGGACCTCATGGATGGGCTGCCCCAGGTGAT
 AGCAATCAGCTGGCCTGGTTTGAATACTGACCTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR227480 representing NM_007614
Red=Cloning site Green=Tags(s)

MATQADLMELDMAMEPDRKAAVSHWQQSYLDSGIHSGATTTAPSLSGKGNPEEEDVDTSQVLYEWEQGF
SQSFTQEQVADIDGQYAMTRAQRVRAAMFPETLDEGMQIPSTQFDDAAHPTNVQRLAEPQMLKHAVVNL
NYQDDAELATRAIPELTKLLNDEDQVVVNKAAMVHQLSKKEASRHAIMRSPQMVAIVRTMONTNDVET
ARCTAGTLHNLSHHREGLLAIFKSGGIPALVKMLGSPVDSVLFYAITTLHNLHLLHQEGAKMAVRLAGGLQ
KMVALLNKTNVKFLAITTDCLQILAYGNQESKLIILASGGPQALVNIMRTYTYEKLLWTTSRVLKVL SVC
SSNKPAIVEAGGMQALGHLHTDPSQRLVQNCLWTLRNLSDAATKQEGMEGLLGTLVQLLGSDDINVTCA
AGILSNLTCNNYKNMMVCQVGGIEALVRTVLRAGDREDITEPAICALRHLLSRHQEAEMAQNAVRLHYG
LPVVVLLHPPSHWPLIKATVGLIRNLALCPANHAPLREQGAI PRLVQLLVRAHQDTQRRTSMGGTQQQF
VEGVRMEEIVEGCTGALHILARDVHNRI VIRGLNTIPLFVQLLYSPIENIQRVAAGVLC ELAQDKEAAEA
IEAEGATAPL TELLHSRNEGVATYAAAVLFRMSEDKPQDYKKRLSVELTSSLFRTEPMAWNETADLGLDI
GAQGEALGYRQDDPSYRSFHSGGYGQDALGMDPMMEHEMGGHHPGADYPVDGLPDLGHAQDLMDGLPPGD
SNQLAWFDTDL

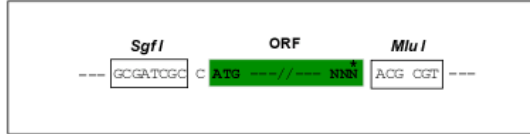
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_007614

ORF Size: 2343 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.

RefSeq: [NM_007614.3](#), [NP_031640.1](#)

RefSeq Size: 3640 bp

RefSeq ORF: 2346 bp

Locus ID: 12387

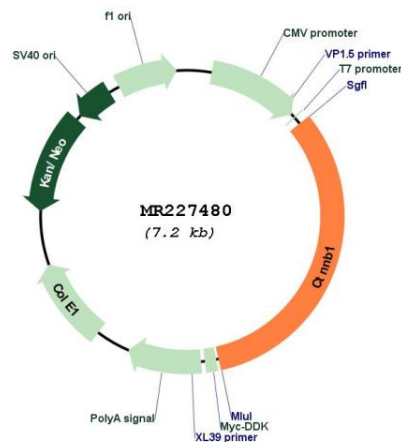
UniProt ID: [Q02248](#)

Cytogenetics: 9 72.19 cM

MW: 85.9 kDa

Gene Summary:

This gene encodes not only an important cytoplasmic component of the classical cadherin adhesion complex that forms the adherens junction in epithelia and mediates cell-cell adhesion in many other tissues but also a key signaling molecule in the canonical Wnt signaling pathway that controls cell growth and differentiation during both normal development and tumorigenesis. The gene product contains a central armadillo-repeat containing domain through which it binds the cytoplasmic tail of classical cadherins; meanwhile, it also binds alpha-catenin, which further links the cadherin complex to the actin cytoskeleton either directly or indirectly. Beta-catenin is therefore necessary for the adhesive function of classical cadherins. Another key function of this protein is to mediate the canonical Wnt signaling pathway and regulate gene transcription. Without Wnt signal, cytoplasmic beta-catenin that is not associated with the cadherin complex is quickly phosphorylated at the N-terminal Ser/Thr residues by the so called degradation complex containing axin, adenomatous polyposis coli (APC), casein kinase I, and GSK3B, then ubiquitinated by beta-TrCP, and degraded by the proteasome. However, in the presence of Wnt signal, the degradation complex is disrupted and the stabilized cytoplasmic beta-catenin translocates into the nucleus, where it binds various transcription factors and, together with these factors, regulates the transcription of many downstream genes. Mutations of this gene have been linked with various types of tumors. Alternatively spliced variants have been found for this gene. [provided by RefSeq, Sep 2009]

Product images:

Circular map for MR227480