

## Product datasheet for **MC220708**

### **Ctnnb1 (BC053065) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ctnnb1 (BC053065) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ctnnb1
Synonyms:	Bfc; Catnb; Mesc
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >BC053065  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTACTCAAGCTGACCTGATGGAGTTGGACATGGCCATGGAGCCGGACAGAAAAGCTGCTGTACGCC  
 ACTGGCAGCAGCAGTCTTACTTGGATTCTGGAATCCATTCTGGTGCCACCACCACAGCTCCTTCCCTGAG  
 TGGCAAGGGCAACCCTGAGGAAGAAGATGTTGACACCTCCAAGTCCTTTATGAATGGGAGCAAGGCTTT  
 TCCAGTCCTTACGCAAGAGCAAGTAGCTGATATTGACGGGCAGTATGCAATGACTAGGGCTCAGAGGG  
 TCCGAGCTGCCATGTTCCCTGAGACGCTAGATGAGGGCATGCAGATCCCATCCACGCAGTTTGACGCTGC  
 TCATCCCCTAATGTCCAGCGCTTGGCTGAACCATCACAGATGTTGAAACATGCAGTTGTCAATTTGATT  
 AACTATCAGGATGACGCGGAACCTGCCACACGTGCAATTCCTGAGCTGACAAAACCTGCTAAACGATGAGG  
 ACCAGGTGGTAGTTAATAAAGCTGCTGTTATGGTCCATCAGCTTCCAAAAAGGAAGCTTCCAGACATGC  
 CATCATGCGCTCCCCTCAGATGGTGTCTGCCATTGTACGCACCATGCAGAATACAATGATGTAGAGACA  
 GCTCGTTGTAAGTCTGGGACTCTGCACAACCTTCTCACCACCGGAGGGCTTGCTGGCCATCTTTAAGT  
 CTGGTGGCATCCCAGCGCTGGTGAATGCTTGGGTCAACAGTGGATTCTGTACTGTTCTACGCCATCAC  
 GACTGACATAATCTCCTGCTCCATCAGGAAGGAGCTAAAATGGCAGTGCCTAGCTGGTGGACTGCAG  
 AAAATGGTTGCTTGGCTCAACAAAAACAACGTGAAATCTTGGCTATTACAACAGACTGCCTCAGATCT  
 TAGCTTATGGCAATCAAGAGAGCAAGCTCATATTCTGGCCAGTGGTGGACCCCAAGCCTTAGTAAACAT  
 AATGAGGACCTACACTTATGAGAAGCTTCTGTGGACCACAAGCAGAGTGTGAAGGTGCTGTCTGTCTGC  
 TCTAGCAACAAGCCGGCCATTGTAGAAGCTGGTGGATGCAGGCACTGGGCTTCATCTGACAGACCCAA  
 GTCAGGACTTGTCAAACCTGCTTTGGACTCTCAGAAACCTTTCAGATGCAGCGACTAAGCAGGAAGG  
 GATGGAAGGCCTCCTTGGGACTCTAGTGCAGCTTCTGGGTTCCGATGATATAAATGTGGTCACTGTGCA  
 GCTGGAATTCTCTCTAACCTCACTTGAATAATTACAAAAACAAGATGATGGTGTGCCAAGTGGGTGGCA  
 TAGAGGCTCTGTACGCACCGCTCTTCTGTGGTGCAGGGAAGACATCACTGAGCCTGCCATCTGTGC  
 TCTTCGTCATCTGACCAGCCGGCATCAGGAAGCCGAGATGGCCAGAATGCCGTTGCGCTTCATTATGGA  
 CTGCTGTTGTGGTTAACTCCTGCACCCACCATCCCCTGCGCTCTGATAAAGGCAACTGTTGGATTGA  
 TTCGAAACCTTGCCTTTGCCAGCAAATCATGCGCTTTCGGGAACAGGGTGTATTCCACGACTAGT  
 TCAGCTGCTTGTACGAGCACATCAGGACACCAACGGCGCACCTCCATGGGTGGAACGCAGCAGCAGTTT  
 GTGGAGGGCGTGCATGGAGGAGATAGTAGAAGGTGTACTGGAGCTCTCCACATCCTTGTCTGGGACG  
 TTCACAACCGGATTGTAATCCGAGGACTCAATACCATTCCATTGTTTGTGCAATTGCTTTATTCTCCCAT  
 TGAAAATATCAAAGAGTAGCTGCAGGGTCTCTGTGAACCTGCTCAGGACAAGGAGGCTGCAGAGGCC  
 ATTGAAGCTGAGGGAGCCACAGCTCCCCTGACAGAGTACTCCACTCCAGGAATGAAGGCGTGGCAACAT  
 ACGCAGCTGTGTCTATTCCGAATGTCTGAGGACAAGCCACAGGATTACAAGAAGCGGCTTTCAGTCGA  
 GCTGACCAGTTCCTCTCAGGACAGAGCCAATGGCTTGGAAATGAGACTGCAGATCTTGGACTGGACATT  
 GGTGCCAGGGGAGAAGCCCTTGGATATCGCCAGGATGATCCCAGCTACCGTTCTTTTCACTCTGGTGGAT  
 ACGGCCAGGATGCCTTGGGATGGACCTATGATGGAGCATGAGATGGGTGGCCACCACCCTGGTGTGA  
 CTATCCAGTTGATGGGCTGCCTGATCTGGGACAGCCACAGGACCTCATGGATGGGCTGCCCCAGGTGAT  
 AGCAATCAGCTGGCCTGGTTTGAATACTGACCTGTAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCTGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul  
 ACCN: BC053065  
 Insert Size: 2346 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](mailto: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](#)

**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:** [BC053065](#), [AAH53065](#)

**RefSeq Size:** 3565 bp

**RefSeq ORF:** 2345 bp

**Locus ID:** 12387

**Cytogenetics:** 9 72.19 cM

**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 ubiquitylated 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]