

## Product datasheet for **MC221552**

### **Ctnnb1 (NM\_007614) Mouse Untagged Clone**

#### **Product data:**

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



[View online »](#)

**Fully Sequenced ORF:** >MC221552 representing NM\_007614  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTACTCAAGCTGACCTGATGGAGTTGGACATGGCCATGGAGCCGGACAGAAAAGCTGCTGTACGCC  
 ACTGGCAGCAGCAGTCTTACTTGGATTCTGGAATCCATTCGGTGCCACCACCACAGCTCCTCCCTGAG  
 TGGCAAGGGCAACCCTGAGGAAGAAGATGTTGACACCTCCAAGTCCTTTATGAATGGGAGCAAGGCTTT  
 TCCAGTCCTTACGCAAGAGCAAGTAGCTGATATTGACGGGCAGTATGCAATGACTAGGGCTCAGAGGG  
 TCCGAGCTGCCATGTTCCCTGAGACGCTAGATGAGGGCATGCAGATCCCATCCACGCAGTTTGACGCTGC  
 TCATCCCCTAATGTCCAGCGCTTGGCTGAACCATCACAGATGTTGAAACATGCAGTTGTCAATTTGATT  
 AACTATCAGGATGACGCGGAACCTGCCACACGTGCAATTCCTGAGCTGACAAAACCTGCTAAACGATGAGG  
 ACCAGGTGGTAGTTAATAAAGCTGCTGTTATGGTCCATCAGCTTCCAAAAAGGAAGCTCCAGACATGC  
 CATCATGCGCTCCCTCAGATGGTGTCTGCCATTGTACGCACCATGCAGAATACAATGATGTAGAGACA  
 GCTCGTTGTAAGTCTGGGACTCTGCACAACCTTCTCACCACCGGAGGGCTTGCTGGCCATCTTTAAGT  
 CTGGTGGCATCCCAGCGCTGGTGAATGCTTGGGTACCAAGTGGATTCTGTACTGTTCTACGCCATCAC  
 GACTGACATAATCTCCTGCTCCATCAGGAAGGAGCTAAAATGGCAGTGCCTAGCTGGTGGACTGCAG  
 AAAATGGTTGCTTGGCTCAACAAAAACAACGTGAAATCTTGGCTATTACAACAGACTGCCTCAGATCT  
 TAGCTTATGGCAATCAAGAGAGCAAGCTCATATTCTGGCCAGTGGTGGACCCCAAGCCTTAGTAAACAT  
 AATGAGGACCTACACTTATGAGAAGCTTCTGTGGACCACAAGCAGAGTGTGAAGGTGCTGTCTGTCTGC  
 TCTAGCAACAAGCCGGCATTGTAGAAGCTGGTGGATGCAGGCACTGGGCTTCATCTGACAGACCCAA  
 GTCAGCGACTTGTCAAACCTGCTTTGGACTCTCAGAAACCTTTCAGATGCAGCGACTAAGCAGGAAG  
 GATGGAAGGCCTCCTTGGGACTCTAGTGCAGCTTCTGGGTTCCGATGATATAAATGTGGTACCTGTGCA  
 GCTGGAATTCTCTCTAACCTCACTTGAATAATTACAAAAACAAGATGATGGTGTGCCAAGTGGGTGGCA  
 TAGAGGCTCTGTACGCACCGCTCTTCTGTGGTGCAGGGAAGACATCACTGAGCCTGCCATCTGTGC  
 TCTTCGTATCTGACCAGCCGGCATCAGGAAGCCGAGATGGCCAGAATGCCGTTGCGCTTCATTATGGA  
 CTGCTGTGTGGTTAACTCCTGCACCCACCATCCACTGGCCTCTGATAAAGGCAACTGTTGGATTGA  
 TTCGAAACCTTGGCCTTGGCCAGCAAATCATGCGCTTTCGGGAACAGGGTGTATTCCACGACTAGT  
 TCAGCTGCTTGTACGAGCACATCAGGACACCCACGGCGCACCTCCATGGGTGGAACGCAGCAGCAGTTT  
 GTGGAGGGCGTGCATGGAGGAGATAGTAGAAGGTGTACTGGAGCTCTCCACATCCTTGTCTCGGGACG  
 TTCACAACCGGATTGTAATCCGAGGACTCAATACCATTCCATTGTTTGTGCAATTGCTTTATTCTCCCAT  
 TGAATAATCCAAAGAGTAGCTGCAGGGTCTCTGTGAACCTGCTCAGGACAAGGAGGCTGCAGAGGCC  
 ATTGAAGCTGAGGGAGCCACAGCTCCCCTGACAGAGTACTCCACTCCAGGAATGAAGGCGTGGCAACAT  
 ACGCAGCTGCTGTCTATTCCGAATGTCTGAGGACAAGCCACAGGATTACAAGAAGCGGCTTTCAGTCGA  
 GCTGACCAGTTCCTCTCAGGACAGAGCCAATGGCTTGGAAATGAGACTGCAGATCTTGGACTGGACATT  
 GGTGCCAGGGAGAAGCCCTTGGATATCGCCAGGATGATCCCAGCTACCGTTCTTTCACTCTGGTGGAT  
 ACGGCCAGGATGCCTTGGGATGGACCTATGATGGAGCATGAGATGGGTGGCCACCACCCTGGTGTGA  
 CTATCCAGTTGATGGGCTGCCTGATCTGGGACAGCCAGGACCTCATGGATGGGCTGCCCCAGGTGAT  
 AGCAATCAGCTGGCCTGGTTTGATACTGACCTG**TAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** Sgfl-Mlul  
**ACCN:** NM\_007614  
**Insert Size:** 2346 bp

<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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_007614.3</a> , <a href="#">NP_031640.1</a>
<b>RefSeq Size:</b>	3640 bp
<b>RefSeq ORF:</b>	2346 bp
<b>Locus ID:</b>	12387
<b>UniProt ID:</b>	<a href="#">Q02248</a>
<b>Cytogenetics:</b>	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]

Transcript Variant: This variant (1) represents the longer transcript. Both variants 1 and 2 encode the same protein.