

## Product datasheet for **RC217341**

### **B7-2 (CD86) (NM\_175862) Human Tagged ORF Clone**

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | B7-2 (CD86) (NM_175862) Human Tagged ORF Clone                              |
| Tag:                      | Myc-DDK   |
| Symbol:                   | B7-2  |
| Synonyms:                 | B7-2; B7.2; B70; CD28LG2; LAB72   |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >RC217341 representing NM_175862<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGATCCCCAGTGCCTATGGGACTGAGTAACATTCTCTTTGTGATGGCCTTCCTGCTCTCTGGTGCTG  
CTCCTCTGAAGATTCAAGCTTATTTCAATGAGACTGCAGACCTGCCATGCCAATTTGCAAACCTCAAAA  
CCAAAGCCTGAGTGAGCTAGTAGTATTTGGCAGGACCAGGAAAACCTGGTTCTGAATGAGGTATACTTA  
GGCAAAGAGAAAATTTGACAGTGTTCAATCAAGTATATGGGCCGCACAAGTTTTGATTCCGACAGTTGGA  
CCCTGAGACTTACAATCTTCAGATCAAGGACAAGGGCTTGATCAATGTATCATCCATCACAAAAGCC  
CACAGGAATGATTCGCATCCACCAGATGAATTCGAACTGTCAGTGCTTGCTAATTCAGTCAACCTGAA  
ATAGTACCAATTTCTAATATAACAGAAAATGTGTACATAAATTTGACCTGCTCATCTATACACGGTTACC  
CAGAACCTAAGAAGATGAGTGTTTTGCTAAGAACCAAGAATTCAGTATGATGGTATTATGCA  
GAAATCTCAAGATAATGTCACAGAAGTGTACGACGTTCCATCAGCTTGCTGTTTCATTCCCTGATGTT  
ACGAGCAATATGACCATCTTCTGTATTCTGAAACTGACAAGACGCGCTTTTATCTTCACTTTCTCTA  
TAGAGCTTGAGGACCCTCAGCCTCCCCAGACCACATTCCTTGGATTACAGCTGTACTTCCAACAGTTAT  
TATATGTGTGATGGTTTTCTGTCTAATTTCTATGGAATGGAAGAAGAAGAAGCGGCTCGCAACTCTTAT  
AAATGTGGAACCAACACAATGGAGAGGGAAGAGAGTGAACAGACCAAGAAAAGAGAAAAATCCATATAC  
CTGAAAGATCTGATGAAGCCAGCGTGTTTTAAAAGTTCGAAGACATCTTCATGCGCAAAAAGTGATAC  
ATGTTTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC217341 representing NM\_175862  
Red=Cloning site Green=Tags(s)

MDPQCTMGLSNILFVMAFLLSGAAPLKIQAYFNETADLPCQFANSQNSLSELVVFWDQENLVNEVYL  
 GKEKFDVSHSKYMGRTSFDSDSWTLRLHNLQIKDKGLYQCIHHKKPTGMIRIHQMNSLSVLANSQPE  
 IVPISNITENVYINLTCSSIHGYPEPKMSVLLRRTKNSTIEYDGMQKSQDNVTELYDVSISLSVSFPDV  
 TSNMTIFCILETDKTRLLSSPFSIELEDPPPPDHIPWITAVLPTVIICVMVFCLILWKWKKKRPRNSY  
 KCGTNTMERESEQTKKREKIHIPERSDEAQRVFKSSKTSKCDKSDTCF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja2324\\_f01.zip](https://cdn.origene.com/chromatograms/ja2324_f01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_175862

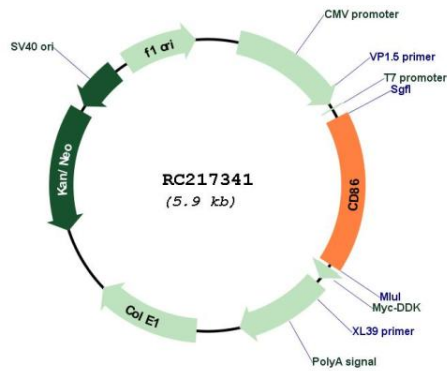
**ORF Size:** 987 bp

**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.

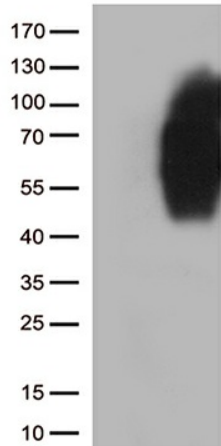
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

|                               |   |
|-------------------------------|---|
| <b>OTI Annotation:</b>        | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.  |
| <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_175862.4</a> , <a href="#">NP_787058.4</a>   |
| <b>RefSeq Size:</b>           | 2735 bp   |
| <b>RefSeq ORF:</b>            | 990 bp  |
| <b>Locus ID:</b>              | 942   |
| <b>UniProt ID:</b>            | <a href="#">P42081</a>  |
| <b>Cytogenetics:</b>          | 3q13.33   |
| <b>Protein Families:</b>      | Druggable Genome, Transcription Factors, Transmembrane  |
| <b>Protein Pathways:</b>      | Allograft rejection, Autoimmune thyroid disease, Cell adhesion molecules (CAMs), Graft-versus-host disease, Systemic lupus erythematosus, Toll-like receptor signaling pathway, Type I diabetes mellitus, Viral myocarditis   |
| <b>MW:</b>                    | 38.1 kDa  |
| <b>Gene Summary:</b>          | This gene encodes a type I membrane protein that is a member of the immunoglobulin superfamily. This protein is expressed by antigen-presenting cells, and it is the ligand for two proteins at the cell surface of T cells, CD28 antigen and cytotoxic T-lymphocyte-associated protein 4. Binding of this protein with CD28 antigen is a costimulatory signal for activation of the T-cell. Binding of this protein with cytotoxic T-lymphocyte-associated protein 4 negatively regulates T-cell activation and diminishes the immune response. Alternative splicing results in several transcript variants encoding different isoforms.[provided by RefSeq, May 2011] |

Product images:



Circular map for RC217341



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CD86 (Cat# RC217341, 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-CD86 (Cat# [TA813131])(1:1000).