

## Product datasheet for **RC400490**

### **CBL (NM\_005188) Human Mutant ORF Clone**

#### **Product data:**

Product Type:	Mutant ORF Clones
Product Name:	CBL (NM_005188) Human Mutant ORF Clone
Mutation Description:	R420L
Affected Codon#:	420
Affected NT#:	c.1259
Nucleotide Mutation:	CBL Mutant (R420L), Myc-DDK-tagged ORF clone of Homo sapiens Cas-Br-M (murine) ecotropic retroviral transforming sequence (CBL) as transfection-ready DNA
Effect:	Missense
Symbol:	CBL
Synonyms:	C-CBL; CBL2; FRA11B; NSLL; RNF55
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_005188
ORF Size:	2718 bp
Restriction Sites:	Sgfi-MluI



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**ORF Nucleotide Sequence:**

>RC400490 representing NM\_005188  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCGGCAACGTGAAGAAGAGCTCTGGGGCCGGGGCGGCAGCGGCTCCGGGGCTCGGGTTCGGGTG  
 GCCTGATTGGGCTCATGAAGGACGCCTTCCAGCCGCACCACCACCACCACCACCTCAGCCCCACCC  
 GCCGGGACGGTGGACAAGAAGATGGTGGAGAAGTCTGGAAGCTCATGGACAAGGTGGTGGGTTGTGT  
 CAGAACCACAAAGCTGGCGCTAAAGAATAGCCACCTTATATCTTAGACCTGCTACCAGATACCTACCAGC  
 ATCTCCGTAATCTTGTCAAGATATGAGGGGAAGATGGAGACACTTGGAGAAAATGAGTATTTAGGGT  
 GTTTATGGAGAATTTGATGAAGAAAATAAGCAAACCATAAAGCCTCTTCAAGGAGGAAAAAGAAAGATG  
 TATGAGGAGAATCTCAGCCTAGGCGAAACCTAACCAAAGTGTCCCTCATCTTCAGCCACATGCTGGCAG  
 AACTAAAAGGAATCTTCCAAGTGGACTCTTTCAGGGAGACACATTTCCGATTACTAAAGCAGATGCTGC  
 GGAATTTTGGAGAAAAGCTTTTGGGGAAAAGACAATAGTCCCTTGAAGAGCTTTCGACAGGCTCTACAT  
 GAAGTGCATCCCATCAGTCTGGGCTGGAGGCCATGGCTCTGAAATCCACTATTGATCTGACCTGCAATG  
 ATTATATTTTCGGTTTTTGAATTTGACATCTTACCCGACTCTTTCAGCCCTGGTCTCTTTGCTCAGGAA  
 TTGGAACAGCCTTGTGTAACCTCATCTGGCTACATGGCTTTTTTACGATGACGAAAGTAAAGCTCGG  
 CTCCAGAAATTCATCACAAACCTGGCAGTTATATCTTCCGGCTGAGCTGTAAGTCTGGGTCAGTGGG  
 CTATTGGGTATGTTACTGCTGATGGGAACATTCACAGACAATCCCTCACAATAAACCTCTTCCAAGC  
 ACTGATTGATGGCTTCAGGGAAGGCTTCTATTTGTTTCTGATGGACGAAATCAGAATCCTGATCTGACT  
 GGCTTATGTGAACCAACTCCCAAGACCATATCAAAGTGACCCAGGAACAATATGAATTAATACTGTGAGA  
 TGGGCTCCACTTCCAACATGTAAAAATGTGCTGAAAATGATAAGGATGTAAGAGTGAAGCCCTGTGG  
 ACACCTCATGTGCACATCCTGTCTTACATCCTGGCAGGAATCAGAAGGTCAGGGCTGTCCTTTCTGCCTA  
 TGTGAAATTAAGGTAAGTGAACCCATCCTGGTGTAGATCCGTTTGTCTAGAGGGAGTGGCAGCCTGTTGA  
 GGCAAGGAGCAGAGGGAGCTCCCTCCCAAAATATGATGATGATGATGATGAAACGAGCTGATGACTCT  
 CTTTATGATGAAGGAATTGGCTGGTGGCAAGGTGGAACGGCCGCTTCTCCATTCTCCATGGCCCCACAA  
 GCTTCCCTTCCCGGTGCCACCAGACTTGACCTTCTGCCGACGAGTATGTGTTCCCTCAAGTGCTT  
 CTGCTCTTGGAACTGCTTCAAGGCTGCTTCTGGCTCCCTTATAAAGACAAACCATTGCCAGTACCTCC  
 CACACTTCGAGATCTTCCACCACCACCGCTCCAGACCGCCATATTCTGTTGGAGCAGAATCCCGACT  
 CAAAGACGCCCTTGCTTGTACACCAGGCGACTGTCCCTCCAGAGACAAACTGCCCCCTGTCCCTCTA  
 GCCGCTTGGAGACTCATGGCTGCCCGGCCAATCCCAAAAGTACCAGTATCTGCCCAAGTTCCAGTGA  
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 AGACCAGATGTGCTTAGGCTCGGAAGCACGTTCACTCTGGATACCTCCATGAGTATGAATAGCAGCCAT  
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 AGCAGATTGATAGCTGTACGTATGAAGCAATGTATAATATTAGTCCCAGGCGCCATCTATCACCAGAG  
 CAGCACCTTTGGTGAAGGAATTTGGCCGAGCCCATGCCAACACTGGTCCCAGGAGTCAAGAAATGAG  
 GATGATGGGTATGATGTCCCAAGCCACTGTGCCGGCCGTGCTGGCCCGCCAACTCTCTCAGATATCT  
 CTAATGCCAGCTCCTCCTTTGGCTGGTGTCTCTGGATGGTGTCTTACAACAAATGTCCTGAAGGTTT  
 CCAAGTTCCCAGAGGCTCCAAAACCTTCCCGGAGAAATCAACTCTGAACGAAAGCTGGCAGCTGT  
 CAGCAAGGTAGTGGTCTGCCGCTCTGCTGCCACCGCTCACCTCAGCTCTCCAGTGAATCGAGAACC  
 TCATGAGTCAGGGTACTCCTACCAGGACATCCAGAAAGCTTTGGTCAATGCCAGAACAAACATCGAGAT  
 GGCCAAAACATCCTCCGGGAATTTGTTCCATTTCTTCTCTGCCATGTAGCTACC

**ACGCGT**ACGCGGCGGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC400490 representing NM\_005188  
 Red=Cloning site Green=Tags(s)

MAGNVKKSSGAGGSGSGSGSGLI GLMKDAFQPHHHHHHLSPHPPGTVDKMKVEKCKWLMDKVVRLC  
 QNPKLALKNPPYILDLLPDTYQHLRTILSRYEGKMETLGENEYFRVFMENLMKKTQTISLFKEGKERM  
 YEENSQPRRNLTKLSLIFSHMLAELKGI FPSGLFQGDTRITKADAAEFWRKAFGEKTI VPKSFRQALH  
 EVHPISSGLEAMALKSTIDLTCNDYISVF EFDIFTRLFQPWSSLLRNWNSLAVTHPGYMAFLTYDEVKAR  
 LQKFIHKPGSYIFRLSCTRLGQWAIGYVTADGNILQTI PHNKPLFQALIDGFREGFYLPDGRNQNPDLT  
 GLCEPTQDHIKVTQEYELYCEMGSTFQLCKICAENDKVKIEPCGHLMCTSLT SWQESEGGQCPFL  
 CEIKGTEPIVVDPDFPRGSGLLRQGAEGAPSPNYDDDDDERADDTLFMMKELAGAKVERPPSPFSMAPQ  
 ASLPPVPPRLDLLPQRVCVPSSASALGTASKAASGSLHKDKPLVPPTLRDLPPPPPPDRPYSVGAESRP  
 QRRPLCTPGDCPSRDKLPPVPSRLGDSWLRPPIPKVPVSAPSSDPWTGREL TNRHSLPFLSPSQMEP  
 RPDVPRLGSTFSLDTSMSMNSSPLVGPECDHPKIKPSSSANAIYSLAARPLVPKLPPEQCEGEEDTEY  
 MTPSSRPLRPLDTSQSSRACDCQQIDSCTYEAMYNISQSQAPSITESSTFGEGNLA AHANTGPEESENE  
 DDGYDVPKPPVAVLARRTLSDISNASSFGWLSLDGDP TTNVTEGSQVPERPPKPFRRINSEKAGSC  
 QQGSGPAASAATASPQLSSEIENLMSQYSYQDIQKALVIAQNNIEMAKNILREFVSISSPAHVAT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**



<b>OTI Disclaimer:</b>	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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a>
<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>RefSeq:</b>	<a href="#">NP_005179</a>
<b>RefSeq Size:</b>	11241 bp
<b>RefSeq ORF:</b>	2721 bp
<b>Locus ID:</b>	867
<b>Cytogenetics:</b>	11q23.3
<b>Domains:</b>	UBA, RING, Cbl_N
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>Protein Pathways:</b>	Chronic myeloid leukemia, Endocytosis, ErbB signaling pathway, Insulin signaling pathway, Jak-STAT signaling pathway, Pathways in cancer, T cell receptor signaling pathway, Ubiquitin mediated proteolysis
<b>MW:</b>	99 kDa
<b>Gene Summary:</b>	This gene is a proto-oncogene that encodes a RING finger E3 ubiquitin ligase. The encoded protein is one of the enzymes required for targeting substrates for degradation by the proteasome. This protein mediates the transfer of ubiquitin from ubiquitin conjugating enzymes (E2) to specific substrates. This protein also contains an N-terminal phosphotyrosine binding domain that allows it to interact with numerous tyrosine-phosphorylated substrates and target them for proteasome degradation. As such it functions as a negative regulator of many signal transduction pathways. This gene has been found to be mutated or translocated in many cancers including acute myeloid leukaemia, and expansion of CGG repeats in the 5' UTR has been associated with Jacobsen syndrome. Mutations in this gene are also the cause of Noonan syndrome-like disorder. [provided by RefSeq, Jul 2016]