

Product datasheet for RC204554

CLYBL (NM_206808) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	CLYBL
Synonyms:	CLB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204554 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCGCTACGTCTGCTGCGGAGGGCGGCGCGGAGCTGCGGCGGCGGCGCTGCTGAGGCTGAAAGCGT
 CTCTAGCAGCTGATATCCCCAGACTTGGATATAGTTCCTCATCCCATCACAAGTACATCCCCGGAGGGC
 AGTGCTTTATGTACCTGGAAATGATGAAAAGAAAATAAGAAGATTCCATCCCTGAATGTAGATTGTGCA
 GTGCTCGACTGTGAGGATGGAGTGGCTGCAACAAAAAGAATGAAGCTCGACTGAGAATTGTAAAACTC
 TTGAAGACATTGATCTGGGCCCTACTGAAAAATGTGTGAGAGTCAACTCAGTTTCCAGTGGTCTGGCGGA
 AGAAGACCTAGAGACCTTTTGCAATCCCGGGTCCTTCTCCAGCCTGATGCTACCAAAGGTGGAAGT
 CCTGAAGAAATCCAGTGGTTTGACAGACAAATTTTCATTCCACTTAAAAGGCCGAAAACTTGAACAACCA
 TGAATTTAATCCCTTTTGGAAGTGAATGGGTTTGCTCAATTTAAGGCAGTGTGTGAAGAAACCT
 GAAGGTCGGGCTCAAGTAGGTCTTTCTAGATGCAGTCGTTTTTGGAGGAGAAGACTTTCGAGCCAGC
 ATAGGTGCAACAAGTAGTAAAGAAACCTGGATATTCTACGCCCGGCAAAAGATTGTTGTCATAGCGA
 AAGCCTTTGGTCTCAAGCCGTAGATCTGGTGTACATTGACTTTCGAGATGGAGCTGGGCTGCTTAGACA
 GTCACGAGAAGGAGCCGCTTCACTGGTAAGCAGGTGATCACCTAACCAAATGCCGTGGTC
 CAGGAGCAGTTTTCTCTCCCCTGAAAAATTAAGTGGGCTGAAGAAGTATTGCTGCCTTTAAGAAGC
 ATCAACAATTAGGAAAGGGGCTTTACTTTCAAGGGAGTATGATCGACATGCCATTACTGAAGCAGGC
 CCAGAACACTGTTACGCTTGCCACCTCCATCAAGGAAAAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA


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Protein Sequence: >RC204554 protein sequence
 Red=Cloning site Green=Tags(s)

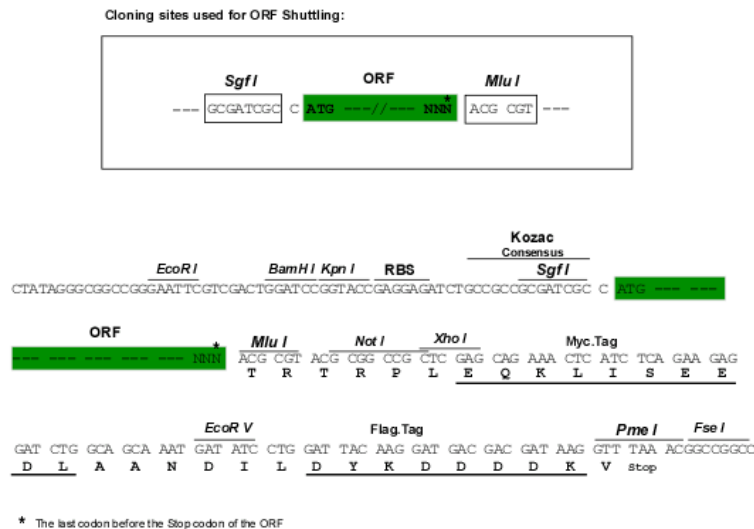
MALRLRRRAARGAAAAALLRLKASLAADIPRLGYSSSSHHKYIPRAVLVYPGNDEKKIKKIPSLNVDCA
 VLDCEGVAANKKNEARLRIVKTLEDIDLGPTEKCVRVNSVSSGLAEEDLETLQSRVLPSSMLPKVES
 PEEIQWFADKFSFHLKGRKLEQPMNLIPFVETAMGLLNFKAVCEETLKVGPOVGLFLDAVVFGGEDFRAS
 IGATSSKETLDILYARQKIVVIAKAFGLQAVDLVYIDFRDGAGLLRQSRGAAMGFTGKQVIHPNQIAVV
 QEQFSPSPEKIKWAEELIAAFKEHQQLGKGAFTFQGSMDMPLLKQAQNTVTLATSIEK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6325_d03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_206808

ORF Size: 1020 bp

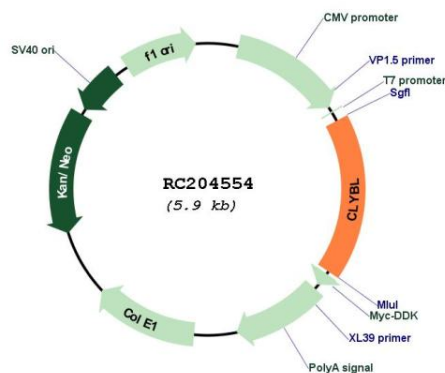
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

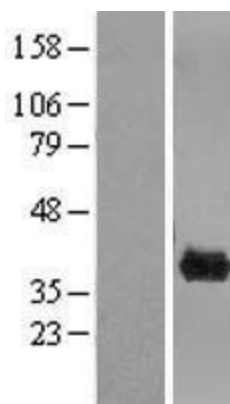
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_206808.3</u>
RefSeq Size:	1401 bp
RefSeq ORF:	1023 bp
Locus ID:	171425
UniProt ID:	<u>Q8N0X4</u>
Cytogenetics:	13q32.3
MW:	37.3 kDa
Gene Summary:	Mitochondrial citramalyl-CoA lyase indirectly involved in the vitamin B12 metabolism (PubMed:29056341). Converts citramalyl-CoA into acetyl-CoA and pyruvate in the C5-dicarboxylate catabolism pathway (PubMed:29056341). The C5-dicarboxylate catabolism pathway is required to detoxify itaconate, a vitamin B12-poisoning metabolite (PubMed:29056341). Also acts as a malate synthase in vitro, converting glyoxylate and acetyl-CoA to malate (PubMed:29056341, PubMed:24334609). Also displays malyl-CoA thioesterase activity (PubMed:29056341). Also acts as a beta-methylmalate synthase in vitro, by mediating conversion of glyoxylate and propionyl-CoA to beta-methylmalate (PubMed:24334609, PubMed:29056341). Also has very weak citramalate synthase activity in vitro (PubMed:24334609, PubMed:29056341).[UniProtKB/Swiss-Prot Function]

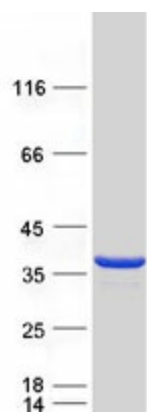
Product images:



Circular map for RC204554



Western blot validation of overexpression lysate (Cat# [LY404217]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204554 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CLYBL protein (Cat# [TP304554]). The protein was produced from HEK293T cells transfected with CLYBL cDNA clone (Cat# RC204554) using MegaTran 2.0 (Cat# [TT210002]).