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Product datasheet for RC207224

GCLM (NM_002061) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GCLM (NM_002061) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GCLM
Synonyms:	GLCLR
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC207224 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGGCACCGACAGCCGCGCGGCCAAGGCGCTCCTGGCGCGGGCCCGCACCCTGCACCTGCAGACGGGGA ACCTGCTGAACTGGGGCCGCCTGCGGAAGAAGTGCCCGTCCACGCACAGCGAGGAGCTTCATGATTGTAT CCAAAAAACCTTGAATGAATGGAGTTCCCAAATCAACCCAGATTTGGTCAGGGAGTTTCCAGATGTCTTG GAATGCACTGTATCTCATGCAGTAGAAAAGATAAATCCTGATGAAAGAGAAGAAATGAAAGTTTCTGCAA AACTGTTCATTGTAGAATCAAACTCTTCATCATCAACTAGAAGTGCAGTTGACATGGCCTGTTCAGTCCT TGGAGTTGCACAGCTGGATTCTGTGATCATTGCTTCACCTCCTATTGAAGATGGAGTTAATCTTTCCTTG GAGCATTTACAGCCTTACTGGGAGGAATTAGAAAACTTAGTTCAGAGCAAAAAGATTGTTGCCATAGGTA CCTCTGATCTAGACAAAACACAGTTGGAACAGCTGTATCAGTGGGCACAGGTAAAACCAAATAGTAACCA AGTTAATCTTGCCTCCTGCTGTGTGATGCCACCAGATTTGACTGCATTTGCTAAACAATTTGACATACAG CTGTTGACTCACAATGATCCAAAAGAACTGCTTTCTGAAGCAAGTTTCCAAGAAGCTCTTCAGGAAAGCA TTCCTGACATTCAAGCGCACGAGTGGGTGCCGCTGTGGCTACTGCGGTATTCGGTCATTGTGAAAAGTAG AGGAATTATCAAATCAAAAGGCTACATTTTACAAGCTAAAAGAAGGGGTTCT ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC207224 protein sequence
Red=Cloning site Green=Tags(s)

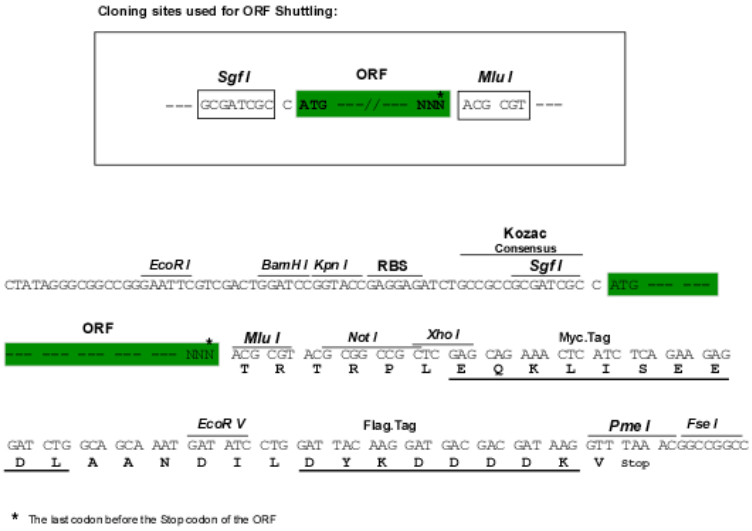
MGTDSRAAKALLARARTLHLQTGNLLNWGRLRKKCPSTHSEELHDCIQKTLNEWSSQINPDLVREFPDVL
ECTVSHAVEKINPDEREEMKVSAKLFIVESNSSSSTRSAVDMACSVLGVAQLDSVIIASPPIEDGVNLSL
EHLQPYWEELENLVQSKKIVAIGTSDLDKTQLEQLYQWAQVKPNSNQVNLASCCVMPPDLTAFAKQFDIQ
LLTHNDPKELLSEASFQEALQESIPDIQAHEWVPLWLLRYSVIVKSRGIIKSKGYILQAKRRGS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

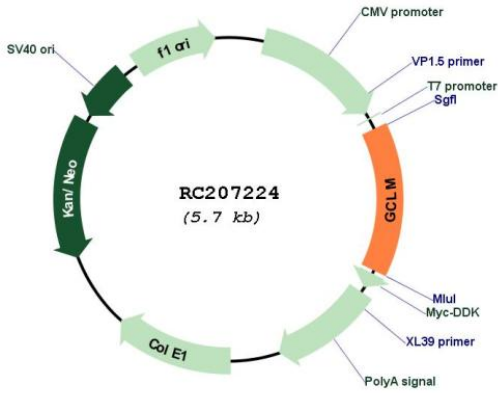
Chromatograms: https://cdn.origene.com/chromatograms/mk6023_e09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:

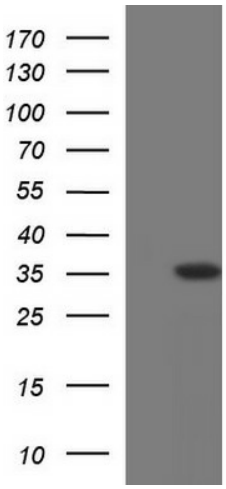


ACCN: NM_002061

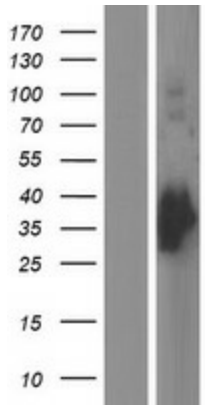
ORF Size:	822 bp
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional 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 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
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.
RefSeq:	NM_002061.4
RefSeq Size:	3074 bp
RefSeq ORF:	825 bp
Locus ID:	2730
UniProt ID:	P48507
Cytogenetics:	1p22.1
Protein Families:	Druggable Genome
Protein Pathways:	Glutathione metabolism, Metabolic pathways
MW:	30.7 kDa

Gene Summary: Glutamate-cysteine ligase, also known as gamma-glutamylcysteine synthetase, is the first rate limiting enzyme of glutathione synthesis. The enzyme consists of two subunits, a heavy catalytic subunit and a light regulatory subunit. Gamma glutamylcysteine synthetase deficiency has been implicated in some forms of hemolytic anemia. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Apr 2015]

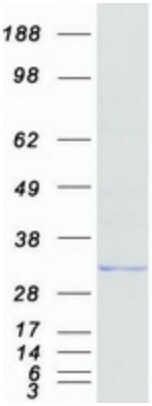
Product images:



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GCLM (Cat# RC207224, 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-GCLM(Cat# [TA590111]). Positive lysates [LY400752] (100ug) and [LC400752] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400752]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207224 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GCLM protein (Cat# [TP307224]). The protein was produced from HEK293T cells transfected with GCLM cDNA clone (Cat# RC207224) using MegaTran 2.0 (Cat# [TT210002]).