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Product datasheet for RC204870

GCAT (NM_014291) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GCAT (NM_014291) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GCAT
Synonyms:	KBL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

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>RC204870 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTGGCCTGGGAACGCCTGGCGCGCCGCACTCTTCTGGGTGCCCCGCGGCCGCCGCGCACAGTCAGCGC
TGGCCCAGCTGCGTGGCATTCTGGAGGGGGAGCTGGAAGGCATCTGCGGAGCTGGCACTTGGAAGAGTGA
GCGGGTCATCACGTCCCGTCAGGGGCCGCACATCCGCGTGGACGGCGTCTCCGGAGGAATCCTTAACTTC
TGTGCCAACAACTACCTGGGCCTGAGCAGCCACCCTGAGGTGATCCAGGCAGGTCTGCAGGCTCTGGAGG
AGTTTGGAGCTGGCCTCAGCTCTGTCCGCTTTATCTGTGGAACCCAGAGCATCCACAAGAATCTAGAAGC
AAAAATAGCCCGCTTCCACCAGCGGGAGGATGCCATCCTCTATCCCAGCTGTTATGACGCCAACGCCGGC
CTCTTTGAGGCCCTGCTGACCCCAGAGGACGCAGTCCTGTCGGACGAGCTGAACCATGCCTCCATCATCG
ACGGCATCCGGCTGTGCAAGGCCCACAAGTACCGCTATCGCCACCTGGACATGGCCGACCTAGAAGCCAA
GCTGCAGGAGGCCCAGAAGCATCGGCTGCGCCTGGTGGCCACTGATGGGGCCTTTTCCATGGATGGCGAC
ATCGCACCCCTGCAGGAGATCTGCTGCCTCGCCTCTAGATATGGTGCCCTGGTCTTCATGGATGAATGCC
ATGCCACTGGCTTCCTGGGGCCCACAGGACGGGGCACAGATGAGCTGCTGGGTGTGATGGACCAGGTCAC
CATCATCAACTCCACCCTGGGGAAGGCCCTGGGTGGAGCATCAGGGGGCTACACGACAGGGCCTGGGCCC
CTGGTGTCCCTGCTGCGGCAGCGCGCCCGGCCATACCTCTTCTCCAACAGTCTGCCACCTGCTGTCGTTG
GCTGCGCCTCCAAGGCCCTAGATCTGCTGATGGGGAGTAACACCATTGTCCAGTCTATGGCTGCCAAGAC
CCAGAGGTTCCGTAGTAAGATGGAAGCTGCTGGCTTCACTATCTCGGGAGCCAGTCACCCCATCTGCCCT
GTGATGCTGGGTGATGCCCGGCTGGCCTCTCGCATGGCGGATGACATGCTGAAGAGAGGCATCTTTGTCA
TCGGGTTCAGCTACCCCGTGGTCCCCAAGGGCAAGGCCTGGATCCGGGTACAGATCTCAGCAGTGCATAG
CGAGGAAGACATTGACCGCTGCGTGGAGGCCTTCGTGGAAGTGGGGCGACTGCACGGGGCACTGCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA
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Protein Sequence:

>RC204870 protein sequence
Red=Cloning site Green=Tags(s)

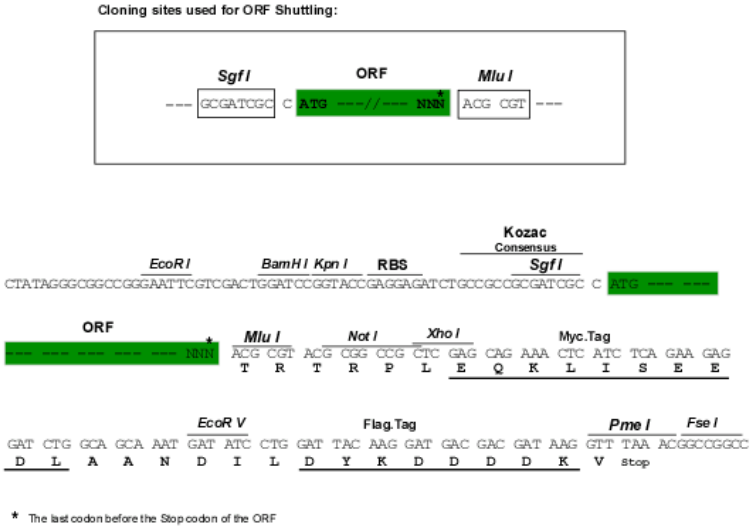
MWPGNAWRAALFWVPRGRRAQSALAQLRGILEGELEGICGAGTWKSERVITSRQGPHIRVDGVSGGILNF
CANNYLGLSSHPEVIQAGLQALEEFGAGLSSVRFICGTQSIHKNLEAKIARFHQREDAILYPSCYDANAG
LFEALLTPEDAVLSDELNHASIIDGIRLCKAHKYRYRHLDMADLEAKLQEAQKHRLRLVATDGAFSMDGD
IAPLQEICCLASRYGALVFMDECHATGFLGPTGRGTDELLGVMDQVTIINSTLGKALGGASGGYTTGPGP
LVSLLRQRARPYLFSNSLPPAVVGCASKALDLLMGSNTIVQSMAAKTQRFRSKMEAAGFTISGASHPICP
VMLGDARLASRMADDMLKRGIFVIGFSYPVVPKGKAWIRVQISAVHSEEDIDRCVEAFVEVGRLHGALP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6580_c02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_014291

ORF Size: 1257 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).

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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_014291.4
RefSeq Size:	1504 bp
RefSeq ORF:	1260 bp
Locus ID:	23464
UniProt ID:	O75600
Cytogenetics:	22q13.1
Domains:	aminotran_1_2
Protein Pathways:	Glycine, serine and threonine metabolism
MW:	45.3 kDa

Gene Summary: The degradation of L-threonine to glycine consists of a two-step biochemical pathway involving the enzymes L-threonine dehydrogenase and 2-amino-3-ketobutyrate coenzyme A ligase. L-Threonine is first converted into 2-amino-3-ketobutyrate by L-threonine dehydrogenase. This gene encodes the second enzyme in this pathway, which then catalyzes the reaction between 2-amino-3-ketobutyrate and coenzyme A to form glycine and acetyl-CoA. The encoded enzyme is considered a class II pyridoxal-phosphate-dependent aminotransferase. Alternate splicing results in multiple transcript variants. A pseudogene of this gene is found on chromosome 14. [provided by RefSeq, Jan 2010]

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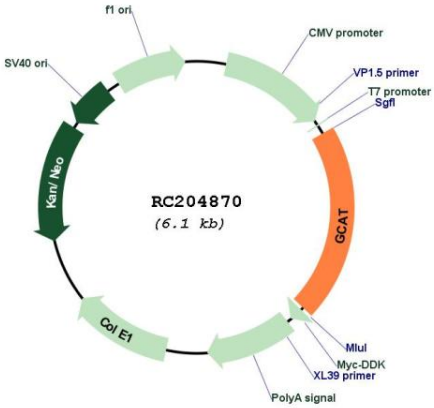
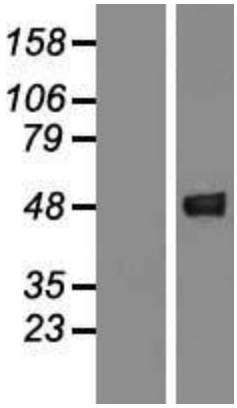
Product images:



Circular map for RC204870



Western blot validation of overexpression lysate (Cat# [LY415378]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204870 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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