

## Product datasheet for **RG230092**

### **GCAT (NM\_001171690) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GCAT (NM_001171690) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GCAT
Synonyms:	KBL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG230092 representing NM\_001171690  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTGGCCTGGGAACGCCTGGCGCGCCGACTCTTCTGGGTGCCCGCGGCCCGCGCACAGTCAGCGC  
 TGGCCAGCTGCGTGGCATTCTGGAGGGGAGCTGGAAGGCATCCGCGGAGCTGGCACTTGAAGAGTGA  
 CGGGTACATCACGTCCCCTCAGGGGCGCACATCCGCGTGGACGGCGTCTCCGGAGGCTGGCACTGTC  
 ATCTTTCCAGGCCTGCCCTTGCCCCACCTGAGCTGCTGTATCCATCTCCTCTCCTCACCTCAGGAATCC  
 TTAACTTCTGTGCCAACAACTACCTGGGCTGAGCAGCCACCCTGAGGTGATCCAGGCAGGTCTGCAGGC  
 TCTGGAGGAGTTTGGAGCTGGCCTCAGCTCTGTCCGCTTATCTGTGGAACCCAGAGCATCCACAAGAT  
 CTAGAAGCAAAAATAGCCCGCTCCACCAGCGGGAGGATGCCATCCTCTATCCCAGCTGTTATGACGCCA  
 ACGCCGGCCTCTTGGAGCCCTGCTGACCCAGAGGACGCAGTCTGTGGACGAGCTGAACCATGCCTC  
 CATCATCGACGGCATCCGGCTGTGCAAGGCCACAAGTACCGCTATCGCCACCTGGACATGGCCGACCTA  
 GAAGCCAAGCTGCAGGAGGCCAGAAGCATCGGCTGCGCCTGGTGGCCACTGATGGGGCCTTTTCCATGG  
 ATGGCGACATCGCACCCCTGCAGGAGATCTGCTGCCTCGCCTCTAGATATGGTGCCTGGTCTTCATGGA  
 TGAATGCCATGCCACTGGCTTCTGGGGCCACAGGACGGGGCACAGATGAGCTGCTGGGTGTGATGGAC  
 CAGGTCACCATCATCAACTCCACCCTGGGGAAGGCCCTGGGTGGAGCATCAGGGGCTACACGACAGGGC  
 CTGGGCCCTGGTGTCCCTGCTGCGGCAGCGCGCCCGCCATACCTCTTCTCCAACAGTCTGCCACCTGC  
 TGTCGTTGGCTGCGCCTCCAAGGCCCTAGATCTGCTGATGGGGAGTAACACCATTGTCCAGTCTATGGCT  
 GCCAAGACCCAGAGGTTCCGTAGTAAGATGGAAGCTGCTGGCTTCACTATCTCGGAGCCAGTCAACCCCA  
 TCTGCCCTGTGATGCTGGGTGATGCCCGCTGGCCTCTCGCATGGCGGATGACATGCTGAAGAGAGGCAT  
 CTTTGTATCGGGTTACGCTACCCCGTGGTCCCAAGGGCAAGGCCGGATCCGGGTACAGATCTCAGCA  
 GTGCATAGCGAGGAAGACATTGACCGCTGCGTGGAGGCCTTCGTGGAAGTGGGGCGACTGCACGGGGCAC  
 TGCCC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG230092 representing NM\_001171690  
 Red=Cloning site Green=Tags(s)

MWPGNAWRAALFWVPRGRRAQSALALRGILEGELEGIRGAGTWKSERVITSRQGPHIRVDGVSGGPGTV  
 IFPGLPLPHLSCCIHLLSFTSGILNFCANNYLGLSSHPEVIQAGLQALEEFAGLSSVRFICGTQSIHKN  
 LEAKIARFHQREDAILYPSCYDANAGLFEALLTPEDAVLSDELNHASIIDGIRLCKAHKYRHRDMADL  
 EAKLQEAQKHLRLVATDGAFFSMDGDIAPLQEIICCLASRYGALVFMDECHATGFLGPTGRGTDLLGVMD  
 QVTIINSTLGKALGGASGGYTTGPGPLVSLLRQRARPYLFSNSLPPAVVGCASKALDLLMGSNTIVQSM  
 AKTQRFRSKMEAAGFTISGASHPICPVMLGDARLASRMADDMLKRGIFVIGFSYPVVPKGRIRVQISA  
 VHSEEDIDRCVEAFVEVGRHLHGALP

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001171690

**ORF Size:** 1335 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.

**RefSeq:** [NM\\_001171690.1](#), [NP\\_001165161.1](#)

**RefSeq Size:** 1656 bp

**RefSeq ORF:** 1338 bp

**Locus ID:** 23464

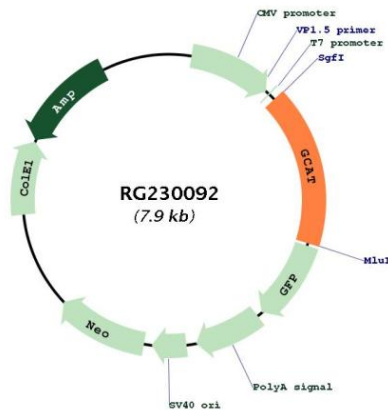
**UniProt ID:** [O75600](#)

**Cytogenetics:** 22q13.1

**Protein Pathways:** Glycine, serine and threonine metabolism

**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]

**Product images:**



Circular map for RG230092