

## Product datasheet for **RG225860**

### **ABAT (NM\_001127448) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ABAT (NM_001127448) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ABAT
Synonyms:	GABA-AT; GABAT; NPD009
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG225860 representing NM\_001127448  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCTCCATGTTGCTCGCCAGCGCCTGGCCTGCAGCTTCCAGCACAGCTACCGCCTGCTGGTGCCTG  
 GATCCAGACACATTAGTCAAGCTGCAGCCAAAGTCGACGTTGAATTTGATTATGATGGGCCCTCTGATGAA  
 GACGGAAGTCCCAGGGCCTAGATCTCAGGAGTTAATGAAACAGCTGAATATAAATTCAGAATGCAGAGGCT  
 GTGCATTTTTTCTGCAATTACGAAGAGAGCCGAGGCAATTACCTGGTTGATGTGGACGGCAACCGAATGC  
 TGGATCTTTATCCAGATCTCCTCTGTCCCCATAGGTTACAGCCACCCCGCCCTGCTGAAACTCATCCA  
 ACAGCCTCAAAATGCGAGCATGTTTGTCAACAGACCCGCCCTCGGAATCCTGCCTCCGGAGAAGTTTGTG  
 GAGAAGCTCCGGCAGTCTTGTCTCGGTGGCTCCCAAAGGGATGCCAGCTCATCACCATGGCCTGCC  
 GCTCCTGTCCAATGAAAACGCCTAAAGACCATCTTCATGTGGTACCGGAGCAAGGAAAGAGGGCAGAG  
 GGGCTTCTCCAGGAGGAGCTGGAGACGTGCATGATTAACAGGCCCTGGCTGCCCGACTACAGCATC  
 CTCTCCTTCATGGGCGCTTCCATGGGAGGACCATGGGTTGCTTAGCGACCACGCACTCTAAAGCCATTC  
 ACAAGATCGACATCCCTTCTTTGACTGGCCATCGCACCGTTCCACAGGCTGAAATACCTCTGGAAGA  
 GTTTGTGAAAGAGAACCAACAGGAGGAGGCCCGCTGTCTGGAAGAGGTGGAGGATCTGATTGTGAAATAT  
 CGGAAAAAGAAGAAGACGGTGGCCGGGATCATCGTGGAGCCCATCCAGTCCGAGGGTGGAGACAACCACG  
 CATCCGATGACTTCTTTTCGGAAGCTGAGAGACATCGCCAGGAAGCATGGCTGCGCCTTCTTGGTGGACGA  
 GGTCCAGACCGGAGGAGGCTGCACGGCAAGTTCTGGGCCATGAGCACTGGGGCCTGGATGACCAGCA  
 GACGTGATGACCTTCAGCAAGAAGATGATGACTGGGGCTTCTTCCACAAGGAGGAGTTCAGGCCTAATG  
 CTCCTACCGGATCTTCAACACCTGGCTGGGGACCCGTCGAAGAACCTGTTGCTGGCTGAGGTCATCAA  
 CATCATCAAGCGGGAGGACCTGCTAAATAATGCAGCCCATGCCGGGAAGGCCCTGCTCACAGGACTGCTG  
 GACCTCCAGGCCCGGTACCCCCAGTTCATCAGCAGGGTGAAGGACGAGGCACCTTTTGTCTCCTTCGATA  
 CTCCCGATGATTCATACGGAATAAGCTCATTTTAATTGCCAGAAACAAAGGTGTGGTGTGGGTGGCTG  
 TGGTGACAAATCCATTTCGTTTCCGTCCCACGCTGGTCTTCAGGGATCACACGCTCACCTGTTCTCAAT  
 ATTTTCAGTGACATCTTAGCAGACTTCAAG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG225860 representing NM\_001127448  
 Red=Cloning site Green=Tags(s)

MASMLLAQRLACSFQHSYRLLVPGSRHISQAAAKVDVEFDYDGPLMKTEVPGPRSQELMKQLNIIQNAEA  
 VHFFCNYEESRGNLVDVDGNRMLDLYSQISSVPIGYSHPLLKLIQQPQNAMFVNRPALGILPPENFV  
 EKLRQSLLSVAPKGMSQLITMACGSCSNENALKTIFMWYRSKERGQRFSGEELETMINQAPGCPDYSI  
 LSFMGAFHGRMGCLATTHSKAIHKIDIPFDWPIAPFPRLKYPLEEFVKENQEEARCLEEVEDLIVKY  
 RKKKKTIVAGIIVEPIQSEGGDNHASDDFFRKLRIARKHGCAFLVDEVQTTGGGCTGKFWAHEHWGLDDPA  
 DVMTFSKMMTGFFHKEEFRPNAPYRIFNTWLGDPKLNLLAEVINIIKREDLLNNAHAGKALLTGLL  
 DLQARYPQFISRVGRGTFCSFDTPDDSI RNKLI IARNKGVVLGGCGDKSIRFRPTLVFRDHHHLFLN  
 IFSIDILADFK

**TRTRPLE** - GFP Tag - V

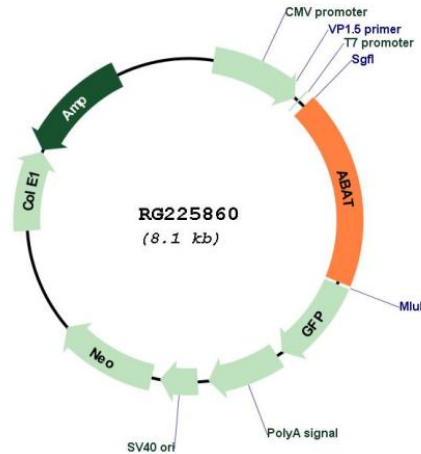
**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**Plasmid Map:**


**ACCN:** NM\_001127448

**ORF Size:** 1500 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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001127448.2</a>
<b>RefSeq Size:</b>	4908 bp
<b>RefSeq ORF:</b>	1503 bp
<b>Locus ID:</b>	18
<b>UniProt ID:</b>	<a href="#">P80404</a>
<b>Cytogenetics:</b>	16p13.2
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Alanine, aspartate and glutamate metabolism, beta-Alanine metabolism, Butanoate metabolism, Metabolic pathways, Propanoate metabolism, Valine, leucine and isoleucine degradation
<b>Gene Summary:</b>	<p>4-aminobutyrate aminotransferase (ABAT) is responsible for catabolism of gamma-aminobutyric acid (GABA), an important, mostly inhibitory neurotransmitter in the central nervous system, into succinic semialdehyde. The active enzyme is a homodimer of 50-kD subunits complexed to pyridoxal-5-phosphate. The protein sequence is over 95% similar to the pig protein. GABA is estimated to be present in nearly one-third of human synapses. ABAT in liver and brain is controlled by 2 codominant alleles with a frequency in a Caucasian population of 0.56 and 0.44. The ABAT deficiency phenotype includes psychomotor retardation, hypotonia, hyperreflexia, lethargy, refractory seizures, and EEG abnormalities. Multiple alternatively spliced transcript variants encoding the same protein isoform have been found for this gene. [provided by RefSeq, Jul 2008]</p>