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Product datasheet for SC111922

ABAT (NM_000663) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ABAT (NM_000663) Human Untagged Clone
Tag:	Tag Free
Symbol:	ABAT
Synonyms:	GABA-AT; GABAT; NPD009
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

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Fully Sequenced ORF:

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>OriGene ORF within SC111922 sequence for NM_000663 edited (data generated by NextGen Sequencing)
ATGGCCTCCATGTTGCTCGCCCAGCGCCTGGCCTGCAGCTTCCAGCACAGCTACCGCCTG
CTGGTGCCTGGATCCAGACACATTAGTCAAGCTGCAGCCAAAGTCGACGTTGAATTTGAT
TATGATGGGCCTCTGATGAAGACGGAAGTCCCAGGGCCTAGATCTCAGGAGTTAATGAAA
CAGCTGAATATAATTCAGAATGCAGAGGCTGTGCATTTTTTCTGCAATTACGAAGAGAGC
CGAGGCAATTACCTGGTTGATGTGGACGGCAACCGAATGCTGGATCTTTATTCCCAGATC
TCCTCTGTTCCCATAGGTTACAGCCACCCCGCCCTGCTGAAACTCATCCAACAGCCTCAA
AATGCGAGCATGTTTGTCAACAGACCCGCCCTCGGAATCCTGCCTCCGGAGAACTTTGTG
GAGAAGCTCCGGCAGTCCTTGCTCTCGGTGGCTCCCAAAGGGATGTCCCAGCTCATCACC
ATGGCCTGCGGCTCCTGCTCCAATGAAAACGCCTTAAAGACCATCTTCATGTGGTACCGG
AGCAAGGAAAGAGGGCAGAGGGGCTTCTCCCAGGAGGAGCTGGAGACGTGCATGATTAAC
CAGGCCCCTGGCTGCCCCGACTACAGCATCCTCTCCTTCATGGGCGCGTTCCATGGGAGG
ACCATGGGTTGCTTAGCGACCACGCACTCTAAAGCCATTCACAAGATCGACATCCCTTCC
TTTGACTGGCCCATCGCACCGTTCCCACGGCTGAAATACCCTCTGGAAGAGTTTGTGAAA
GAGAACCAACAGGAGGAGGCCCGCTGTCTGGAAGAGGTGGAGGATCTGATTGTGAAATAT
CGGAAAAAGAAGAAGACGGTGGCCGGGATCATCGTGGAGCCCATCCAGTCCGAGGGTGGA
GACAACCACGCATCCGATGACTTCTTTCGGAAGCTGAGAGACATCGCCAGGAAGCATGGC
TGCGCCTTCTTGGTGGACGAGGTCCAGACCGGAGGAGGCTGCACGGGCAAGTTCTGGGCC
CATGAGCACTGGGGCCTGGATGACCCAGCAGACGTGATGACCTTCAGCAAGAAGATGATG
ACTGGGGGCTTCTTCCACAAGGAGGAGTTCAGGCCTAATGCTCCCTACCGGATCTTCAAC
ACCTGGCTGGGGGACCCGTCCAAGAACCTGTTGCTGGCTGAGGTCATCAACATCATCAAG
CGGGAGGACCTGCTAAATAATGCAGCCCATGCCGGGAAGGCCCTGCTCACAGGACTGCTG
GACCTCCAGGCCCGGTACCCCCAGTTCATCAGCAGGGTGAGAGGACGAGGCACCTTTTGC
TCCTTCGATACTCCCGATGATTCCATACGGAATAAGCTCATTTTAATTGCCAGAAACAAA
GGTGTGGTGTTGGGTGGCTGTGGTGACAAATCCATTCGTTTCCGTCCCACGCTGGTCTTC
AGGGATCACCACGCTCACCTGTTCCTCAATATTTTCAGTGACATCTTAGCAGACTTCAAG
TAA

Clone variation with respect to NM_000663.4
309 c=>t
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5' Read Nucleotide Sequence:

```
>OriGene 5' read for NM_000663 unedited
GTTCACATTTGTATACGACTCACTATAGGCGGCCGCGATTCGGCACGAGGGCGAGTCGCT
GGGGGAAGTCGAGCAGACACCCAGCGCTGCCGGAACTCGGGGCGCGCATCCCGCAAGTCG
GAACCCGGCGGATCGGATCCCGCAGATCGGAGACGGGGCCTGGAGATGCGCCCATCCAGG
GTCTAGCGGATTGCAAAGGGCCTGGTAGAATCAAAGAGGGATATACTAATGCAACTTCGA
GGGTGGCAGCACGCAAAGGGTGTCCCTGTCCCTCAAGGGGTCATGGCCTCCATGTTGCTC
GCCCAGCGCCTGGCCTGCAGCTTCCAGCACAGCTACCGCCTGCTGGTGCCTGGATCCAGA
CACATTAGTCAAGCTGCAGCCAAAGTCGACGTTGAATTTGATTATGATGGGCCTCTGATG
AAGACGGAAGTCCCAGGGCCTAGATCTCAGGAGTTAATGAAACAGCTGAATATAATTCAG
AATGCAGAGGCTGTGCATTTTTTCTGCAATTACGAAGAGAGCCGAGGCAATTACCTGGTT
GATGTGGACGGCAACCGAATGCTGGATCTTTATTCCCAGATCTCCTCTGTTCCCATAGGT
TACAGCCACCCCGCCCTGCTGAAACTCATCCAACAGCCTCAAAATGCGAGCATGTTTGTC
AACAGACCCGCCCTCGGAATCCTGCCTCCGGAGAACTTTGTGGAGAAGCTCCGGCAGTCC
TTGCTCTCGGTGGCTCCCNAGGGATGTCCCAGCTCATCACCATGGCCTGCGGCTCCTGCT
CCAATGANACGCCTTNAAGACATCTTCATGTGGTACCGGAGCAGGAAAGAGGNCAGAGGG
GCTTCTCCCAGGAGAGCTGGAGACGTGCATGATTAACCANGCCCCTGGCTGCCCNGATAC
AGCATCCTCTTCTTATGGNGCGCG
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3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_000663 unedited
TGGTTTTTTTACGNATTCTTACTAACACAGGNAAACAGCATTTAATTCATGGGAATTGTG
CATATGGTCATCCGTTACATTGTGACATGTTAATTTTTTTTTTATCATTTATTGGCACTG
TCAACAGATTACTTGTGAACAAGATCACTTTGTACGCTTAAGTCTGCGATGCTACTTAGC
TATGGTTTTCTACCATGAGCTTATATATAGATAGGTGTAGGTATGTAGATACATTAATGC
TATACACAATTTTGCATGGTTACTGAGCGTCAGTAAAAATTATGAAAAAACACCCATTTA
TAATAAAAGTGAGGATGTACTAAGACTTGCTATTACTGGACCTTGTTTTCTGTAAAAGTG
ATGACACTTGCTGGACGGTTACTAAACTCTATGGCACTAATGTATGATGGATTCATTTCC
AGACTGTCGGCCACGGAAGCACTTCTTCATGGCCTCTGCCCTGGACAGCAGCCTGTCCTC
CGGGCTCCCCATGTTTTTACCAGCTTCTGCTGAGTTTCTACAATCTTGAGCTCTGCTGAG
AATTCTTTTCCTTGAAATTCTTCTAGCTAAAGCCCCAGCCCCCAAAGGAGCATGTCTCAG
GAACTCATTATGCCCTGAGTCAACAAGAACTTGTTGATAAATGGCTTAAAAGTTTTTACA
AGAAGTAACTTCCCTTGGTAAGGAGTAAATAATAGCTCTGGAATTTTCCAGATAAAACTA
TTTCATTTCTCTGTCAGTGCCCCATGGGGAGAGAACGAAATATTGGAGCCCCTCTCCCTA
CCAAAGAGAGCCACTNTTCTGGTTGTGCCCTGGCTTAAACCCTTTGGACTCCGAGAACAT
ACTGATATTTGACCCATGCTAAATTTTCAGGAGAAGCTACTTAAGCATAATGATATGGTT
GGTTGATTTGCTGCTGCTAATAGCCTANTGACTTGGAGCTGCTGGGAACTGGCTCCAGGA
AGAGTGAGC
```

Restriction Sites: NotI-NotI

ACCN: NM_000663

Insert Size: 4880 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_000663.2, NP_000654.2

RefSeq Size: 4763 bp

RefSeq ORF: 1503 bp

Locus ID: 18

UniProt ID: P80404

Cytogenetics: 16p13.2

Domains: aminotran_3

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Protein Families:	Druggable Genome
Protein Pathways:	Alanine, aspartate and glutamate metabolism, beta-Alanine metabolism, Butanoate metabolism, Metabolic pathways, Propanoate metabolism, Valine, leucine and isoleucine degradation
Gene Summary:	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] Transcript Variant: This variant (2) has an alternate 5' UTR, as compared to variant 1.

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