

Product datasheet for **SC127432**

ABAT (NM_020686) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ABAT (NM_020686) Human Untagged Clone
Tag:	Tag Free
Symbol:	ABAT
Synonyms:	GABA-AT; GABAT; NPD009
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_020686, the custom clone sequence may differ by one or more nucleotides

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ATGGCCTCCATGTTGCTCGCCCAGCGCCTGGCCTGCAGCTTCCAGCACAGCTACCGCCTGCTGGTGCCTG
GATCCAGACACATTAGTCAAGCTGCAGCCAAAGTCGACGTTGAATTTGATTATGATGGGCCTCTGATGAA
GACGGAAGTCCCAGGGCCTAGATCTCAGGAGTTAATGAAACAGCTGAATATAATTCAGAATGCAGAGGCT
GTGCATTTTTCTGCAATTACGAAGAGAGCCGAGGCAATTACCTGGTTGATGTGGACGGCAACCGAATGC
TGGATCTTTATCCAGATCTCCTCTGTCCCCATAGGTTACAGCCACCCCGCCTGCTGAAACTCATCCA
ACAGCCTCAAAATGCGAGCATGTTGTCAACAGACCCGCCCTCGAATCCTGCCTCCGGAGAACTTTGTG
GAGAAGTCCGGCAGTCTTGTCTCGGTGGCTCCAAAGGGATGTCCAGCTCATCACCATGGCCTGCG
GCTCCTGCTCCAATGAAAACGCCTTAAAGACCATCTTCATGTGGTACCGAGCAAGGAAAGAGGGCAGAG
GGGCTTCTCCAGGAGGAGCTGGAGACGTGCATGATTAACCAGGCCCTGGCTGCCCCGACTACAGCATC
CTCTCCTTCATGGGCGCCTTCCATGGGAGGACCATGGGTTGCTTAGCGACCACGCACTCTAAAGCCATTC
ACAAGATCGACATCCCTTCTTTGACTGGCCCATCGCACCGTTCACCGGCTGAAATACCCTCTGGAAGA
GTTTGTGAAAGAGAACCAACAGGAGGAGGCCGCTGTCTGGAAGAGGTGGAGGATCTGATTGTGAAATAT
CGGAAAAAGAAGAAGACGGTGGCCGGGATCATCGTGGAGCCATCCAGTCCGAGGGTGGAGACAACCACG
CATCCGATGACTTCTTCGGAAGCTGAGAGACATCGCCAGGAAGCATGGCTGCGCCTTCTGGTGGACGA
GGTCCAGACCGGAGGAGGCTGCACGGCAAGTTCTGGCCCATGAGCACTGGGGCCTGGATGACCCAGCA
GACGTGATGACCTTCAGCAAGAAGATGATGACTGGGGGCTTCTCCACAAGGAGGAGTTCAGGCCTAATG
CTCCCTACCGGATCTTCAACACCTGGCTGGGGACCCGTCGAAGAACCTGTTGCTGGCTGAGGTCATCAA
CATCATCAAGCGGGAGGACCTGTAAATAATGCAGCCCATGCCGGGAAGGCCCTGCTCACAGGACTGCTG
GACCTCCAGGCCCGGTACCCCAAGTTCATCAGCAGGGTGAAGGACGAGGCACCTTTGCTCCTTCGATA
CTCCCGATGATTCATACGGAATAAGCTCATTTTAATTGCCAGAAACAAAGGTGTGGTGTGGGTGGCTG
TGGTGACAAATCCATTCGTTCCGTCCCACGCTGGTCTCAGGGATCACCAGCTCACCTGTTCTCAAT
ATTTTCAGTGACATCTTAGCAGACTTCAAGTAA
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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_020686 unedited CACTATAGGGCGGCCGCAATTCGGCACGAGGCTCTCCCTTGCGCACTTGCCGGGTACCA GCTGAGTGCATCCTTTTCCCAAACCTGCTCTGCTTCCAAGGGGCCCTTTTCTGTCTCCTC CACCTGTCCCCATGTTTTGGGGACTGCCTGGAAATCCGGGACACCCTCCTGAGGAGGGAG CTGGTGCCCAACGGCACCTTTAGGATGAACCCAGCCAGCTGCGTTCTTGGCCTCTGCAG AATGGCATAACAGAAGGCATTTTAAGCAAGCGAGCTGAGCTCGCCGAGGACTCCGACTAC CAGGCACCGGTGGCAGCACGCAAAGGGTGTCCCTGTCCCTCAAGGGGTCATGGCCTCCAT GTTGCTCGCCACGCGCTGGCCTGCAGCTTCCAGCACAGCTACCGCTGCTGGTGCCTGG ATCCAGACACATTAGTCAAGCTGCAGCCAAAGTTCGACGTTGAATTTGATTATGATGGGC CTCTGATGAAGACGGAAGTCCCAGGGCCTAGATCTCAGGAGTTAATGAAACAGCTGAATA TAATTCAGAAATGCAGAGGCTGTGCATTTTTTCTGCAATTACGAAGAGAGCCGAGGCAATT ACCTGGTTTGATGGTGGACGGCAACCGAATGGCTGGATCTTTATCCAGATCTCCTCTG NTCCCATAGGNTACAGCCACCCCGCCTGCTGAAACTCATNCAACAGCCTCAAATGCGAG CCTTGTGTCAACAGACCCGCCTCGGAATCCTGCTNCGGANAACNTTGGGGANAACNTN CNGCAGTCTTGNTTTTCGGGCTCAAAANNGGGATGTCCANTTATAACCATGGGCTGGG GTTCTGCTCA</p>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_020686 unedited CAGCTTGCCCGCGGCCGAATCTAGGATCGTTTTTTTTTTTTTTTTTTTTTAAATTATAAA TTTTATTTAAGAATACTGACTAACACAGGAAAACAGATTAATTCATGGAATTGTGCATA TGGTCATCCGTTACATTGTGACATGTTAATTTTTTTTTTATCATTATTGGCACTGTCAA CAGATTACTTGTGAACAAGATCACTTTGTACGCTTAAGTCTGCGATGCTACTTAGCTATG GTTTTCTACCATGAGCTTATATATAGATAGGTGTAGGTATGTAGATACATTAATGCTATA CACAATTTTGCATGGTACTGAGCGTCAGTAAAAATTATGAAAAACACCCATTTATAAT AAAAGTGAGGATGTAAGACTTGCTATTACTGGACCTGTTTTCTGTAAAAGTGATGA CACTTGCTGGACGGTTACTAACTCTATGGCACTAATGTATGATGGATTCAATTCAGAC TGTCCGGCACGGAAGCACTTCTCATGGCCTCTGCCCTGGACAGCAGCCTGCTCCTCCGGG CTCCCCATGTTTTTACCAGCTTCTGCTGAGTTTCTACAATCTTGAGCTCTGCTGAGAATT CTTTTCTTGAATTTCTTACCTAAAGCCCCAGCCCCAAAAGAGCATGTCTCAGGAAC TCATTATGCCCTGAGTCAACANGAAGCTTGTGATAAATGGCTTAAAAGTTTTTACAAGAA AGTACTTCCCTTGGTAAGGAGTAATAAATAGCTCTGGAATTTTCCAGATAAACTATTTN ATTTNCTGTGTCAGTGGCCCATGGGGGAGAGAACGAAATTTTGGAGCCTCTCTCCCTA CCAAAGAGAGCCACTTNTTCTGGNTGTGCCCTGNCCTTAAAACCTTTTGAACCTCCGCA GACCCATACTGAATTATTTGCACCCAATGCCTAAGTTTTTTCAGGAGAAGACCTTACTTAA GCCCAATAAN</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_020686
Insert Size:	5270 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_020686.3](#), [NP_065737.2](#)

RefSeq Size: 4830 bp

RefSeq ORF: 1503 bp

Locus ID: 18

UniProt ID: [P80404](#)

Cytogenetics: 16p13.2

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 (1) has a more distal alternate 5' UTR. Variants 1-3 encode the same protein.