ABAT cDNA Clone – 4-Aminobutyrate Aminotransferase (Human)

PRODUCT OVERVIEW

Product Name	ABAT, cDNA Clone
Full Product Name	ABAT cDNA Clone
Product Gene Name	ABAT cdna clone
Sequence	atggcctcca tgttgctcgc ccagcgcctg gcctgcagct tccagcacag ctaccgcctg ctggtgcctg gatccagaca cattagtcaa gctgcagcca aagtcgacgt tgaatttgat tatgatgggc ctctgatgaa gacggaagtc ccagggccta gatctcagga gttaatgaaa cagctgaata taattcagaa tgcagaggct gtgcattttt tctgcaatta cgaagagagc cgaggcaatt acctggttga tgtggacggc aaccgaatgc tggatcttta ttcccagatc tcctctgtcc ccataggtta cagccacccc gccctgctga aactcatcca acagcctcaa aatgcgagca tgtttgtcaa cagacccgcc ctcggaatcc tgcctccgga gaactttgtg gagaagctcc ggcagtcctt gctctcggtg gctcccaaag ggatgtccca gctcatcacc atggcctgcg gctcctgctc caatgaaaac gccttaaaga ccatcttcat gtggtaccgg agcaaggaaa gagggcagag gggcttctcc caggaggagc tggagacgtg catgattaac caggcccctg gctgccccga ctacagcatc ctctccttca tgggcgcgtt ccatgggagg accatgggtt gcttagcgac cacgcactct aaagccattc acaagatcga catcccttcc tttgactggc ccatcgcacc gttcccacgg ctgaaatacc ctctggaaga gtttgtgaaa gagaaccaac aggaggaggc ccgctgtctg gaagaggtgg aggatctgat tgtgaaatat cggaaaaaga agaagacggt ggccgggatc atcgtggagc ccatccagtc cgagggtgga gacaaccacg catccgatga cttctttcgg aagctgagag acatcgccag gaagcatggc tgcgccttct tggtggacga ggtccagacc ggaggaggct gcacgggcaa gttctgggcc catgagcact ggggcctgga tgacccagca gacgtgatga ccttcagcaa gaagatgatg actgggggct tcttccacaa ggaggagttc aggcctaatg ctccctaccg gatcttcaac acctggctgg gggacccgtc caagaacctg ttgctggctg aggtcatcaa catcatcaag cgggaggacc tgctaaataa tgcagcccat gccgggaagg ccctgctcac aggactgctg gacctccagg cccggtaccc ccagttcatc agcagggtga gaggacgagg caccttttgc tccttcgata ctcccgatga ttccatacgg aataagctca ttttaattgc cagaaacaaa ggtgtggtgt tgggtggctg tggtgacaaa tccattcgtt tccgtcccac gctggtcttc agggatcacc acgctcacct gttcctcaat attttcagtg acatcttagc agacttcaag taa
Molecular Weight	56,439 Da
OMIM	137150
Vector	pUC
Clone Sequence Report	Provided with product shipment
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for ABAT cdna clone	MBS1276244 is a cDNA clone targeting ABAT.
Other Notes	Small volumes of ABAT cdna clone vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ABAT. It may not necessarily be applicable to this product.

NCBI GI #	33874525
NCBI GeneID	18
NCBI Accession #	BC015628
UniProt Secondary Accession #	Q16260; Q8N5W2; Q96BG2; Q99800; A8K386
UniProt Related Accession #	P80404
NCBI Official Full Name	Homo sapiens 4-aminobutyrate aminotransferase, mRNA
NCBI Official Synonym Full Names	4-aminobutyrate aminotransferase
NCBI Official Symbol	ABAT

NCBI Official Synonym Symbols	GABAT; NPD009; GABA-AT
UniProt Protein Name	4-aminobutyrate aminotransferase, mitochondrial
UniProt Synonym Protein Names	(S)-3-amino-2-methylpropionate transaminase (EC:2.6.1.22); GABA aminotransferase; GABA-AT; Gamma-amino-N-butyrate transaminase; GABA transaminase; GABA-T; L-AIBAT
UniProt Gene Name	ABAT
UniProt Synonym Gene Names	GABAT; GABA-AT; GABA transaminase; GABA-T
UniProt Entry Name	GABT_HUMAN
NCBI Protein Information	4-aminobutyrate aminotransferase, mitochondrial
NCBI Summary for ABAT	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]
UniProt Comments for ABAT	ABAT: Catalyzes the conversion of gamma-aminobutyrate and L- beta-aminoisobutyrate to succinate semialdehyde and methylmalonate semialdehyde, respectively. Can also convert delta-aminovalerate and beta-alanine. Defects in ABAT are a cause of GABA transaminase deficiency (GABATD). The phenotype of this deficiency includes psychomotor retardation, hypotonia, hyperreflexia, lethargy, refractory seizures, and EEG abnormalities. Belongs to the class-III pyridoxal-phosphate-dependent aminotransferase family. Protein type: Carbohydrate Metabolism - propanoate; Amino Acid Metabolism - alanine, aspartate and glutamate; Transferase; Mitochondrial; EC 2.6.1.19; EC 2.6.1.22; Amino Acid Metabolism - valine, leucine and isoleucine degradation; Other Amino Acids Metabolism - beta-alanine; Carbohydrate Metabolism - butanoate Chromosomal Location of Human Ortholog: 16p13.2 Cellular Component: 4-aminobutyrate transaminase complex; mitochondrial matrix; mitochondrion Molecular Function: 4-aminobutyrate transaminase activity; protein homodimerization activity; pyridoxal phosphate binding; succinate-semialdehyde dehydrogenase binding Biological Process: behavioral response to cocaine; gamma-aminobutyric acid catabolic process Disease: Gaba-transaminase Deficiency
Research Articles on ABAT	**1.** This study utilized ER+ IBC to identify a metagene including ABAT and STC2 as predictive biomarkers for endocrine therapy resistance.
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