

Product datasheet for **RC206793**

ABAT (NM_000663) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ABAT (NM_000663) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ABAT
Synonyms:	GABA-AT; GABAT; NPD009
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC206793 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCCTCCATGTTGCTCGCCAGCGCCTGGCCTGCAGCTTCCAGCACAGCTACCGCCTGCTGGTGCCTG
 GATCCAGACACATTAGTCAAGCTGCAGCCAAAGTCGACGTTGAATTTGATTATGATGGGCCCTCTGATGAA
 GACGGAAGTCCCAGGGCCTAGATCTCGGAGTTAATGAAACAGCTGAATATAAATTCAGAATGCAGAGGCT
 GTGCATTTTTTCTGCAATTACGAAGAGAGCCGAGGCAATTACCTGGTTGATGTGGACGGCAACCGAATGC
 TGGATCTTTATCCAGATCTCCTCTGTCCCATAGGTTACAGCCACCCCGCCCTGCTGAAACTCATCCA
 ACAGCCTCAAAATGCGAGCATGTTGTCAACAGACCCGCCCTCGGAATCTGCCTCCGGAGAAGTTGTG
 GAGAAGCTCCGGCAGTCTTGTCTCGGTGGCTCCCAAAGGGATGCCAGCTCATCACCATGGCCTGCG
 GCTCCTGTCCAATGAAAACGCCTAAAGACCATCTTCATGTGGTACCGAGCAAGGAAAGAGGGCAGAG
 GGGCTTCTCCAGGAGGAGCTGGAGACGTGCATGATTAACAGGCCCTGGCTGCCCGACTACAGCATC
 CTCTCCTTCATGGGCGCTTCCATGGGAGGACCATGGGTTGCTTAGCGACCACGCACTCTAAAGCCATTC
 ACAAGATCGACATCCCTTCTTTGACTGGCCATCGCACCGTTCCACGGCTGAAATACCCCTCTGGAAGA
 GTTTGTGAAAGAGAACCAACAGGAGGAGGCCCGCTGTCTGGAAGAGGTGGAGGATCTGATTGTGAAATAT
 CGGAAAAAGAAGAAGACGGTGGCCGGATCATCGTGGAGCCATCCAGTCCGAGGGTGGAGACAACCACG
 CATCCGATGACTTCTTTGGAAGCTGAGAGACATCGCCAGGAAGCATGGCTGCGCCTTCTTGGTGGACGA
 GGTACAGACCGGAGGAGGCTGCACGGCAAGTTCTGGGCCATGAGCACTGGGGCCTGGATGACCAGCA
 GACGTGATGACCTTCAGCAAGAAAATGATGACTGGGGCTTCTTCCACAAGGAGGAGTTCAGGCCTAATG
 CTCCTACCGGATCTTCAACACCTGGCTGGGGACCCGTCGAAGAACCTGTTGCTGGCTGAGGTCATCAA
 CATCATCAAGCGGAGGACCTGCTAAATAATGCAGCCCATGCCGGGAAGGCCCTGCTCACAGGACTGCTG
 GACCTCCAGGCCCGGTACCCCGTTCATCAGCAGGGTGAAGGACGAGGACCTTTTGTCTCCTTCGATA
 CTCCCGATGATTCATACGGAATAAGCTCATTTTAATTGCCAGAAACAAAGGTGTGGTGTGGGTGGCTG
 TGGTGACAAATCCATTTCGTTCCGTCCACGCTGGTCTTCAGGGATCACACGCTCACCTGTTCTCAAT
 ATTTTCAGTGACATCTTAGCAGACTTCAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC206793 protein sequence
 Red=Cloning site Green=Tags(s)

MASMLLAQRLACSFQHSYRLLVPGSRHISQAAAKVDVEFDYDGLMKTEVPGPRSRELMKQLNIIQNAEA
 VHFFCNYYEESRGNLVDVDGNRMLDLYSQISSVPIGYSHPLLKLIQPPQNASMFVNRPALGILPPENFV
 EKLRQSLLSVAPKGMSQLITMACGSCSNENALKTIFMWYRSKERGQRGFSQEELTCMINQAPGCPDYSI
 LSFMGAFHGRMTGCLATTHSKAIHKIDIPFDWPIAPFPRLKYPLEEFVKENQQEEARCLEEVEDLIVKY
 RKKKKTIVAGIIVEPIQSEGGDNHASDDFRKLRDIARKHGCAFLVDEVQTTGGGCTGKFWAHEHWGLDDPA
 DVMTFSKMMMTGGFFHKEEFRPNAPYRIFNTWLGDPKLNLLAEVINIIKREDLLNNAHAGKALLTGLL
 DLQARYPQFISVRVGRGTFCSFDTPDDSI RNKLLIARNKGVVLGGCGDKSIRFRPTLVFRDHHHLFLN
 IFSIDILADFK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6017_f05.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_000663

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).

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_000663.4](#)

RefSeq Size: 5586 bp

RefSeq ORF: 1503 bp

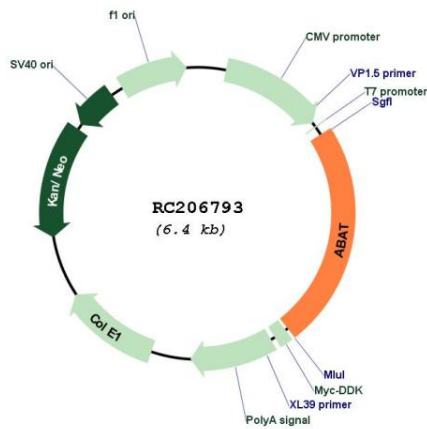
Locus ID: 18

UniProt ID: [P80404](#)

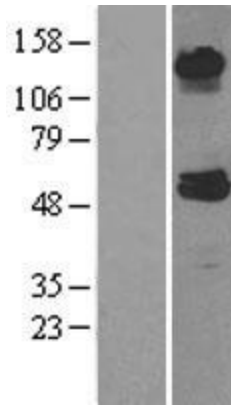
Cytogenetics: 16p13.2

Domains:	aminotran_3
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
MW:	56.5 kDa
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]

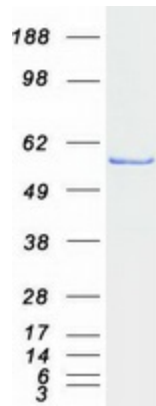
Product images:



Circular map for RC206793



Western blot validation of overexpression lysate (Cat# [LY426789]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC225860] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ABAT protein (Cat# [TP306793]). The protein was produced from HEK293T cells transfected with ABAT cDNA clone (Cat# RC206793) using MegaTran 2.0 (Cat# [TT210002]).