

Product datasheet for **SC119718**

BCKDHA (NM_000709) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BCKDHA (NM_000709) Human Untagged Clone
Tag:	Tag Free
Symbol:	BCKDHA
Synonyms:	BCKDE1A; MSU; MSUD1; OVD1A
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_000709, the custom clone sequence may differ by one or more nucleotides

```
ATGGCGGTAGCGATCGCTGCAGCGAGGGTCTGGCGGCTAAACCGTGGTTTGGAGCCAGGCTGCCCTCTGC
TGCTGCGGCAGCCTGGGGCTCGGGGACTGGCTAGATCTCACCCCCCAGGCAGCAGCAGTTCATC
TCTGGATGACAAGCCCCAGTTCCAGGGGCTCGGCGGAGTTTATAGATAAGTTGGAATTCACAGCCC
AACGTCATCTCTGGAATCCCCATCTACCGCGTCATGGACCGCAAGGCCAGATCATCAACCCAGCGAGG
ACCCACCTGCCGAAGGAGAAGGTGCTGAAGCTCTACAAGAGCATGACTGCTTAACACCATGGACCG
CATCCTCTATGAGTCTCAGCGGCAGGGCCGATCTCCTTCTACATGACCAACTATGGTGAGGAGGCACG
CACGTGGGAGTCCGCCGCCCTGGACAACACGGACCTGGTGTGGCCAGTACCGGAGGCAGGTGTGC
TGATGTATCGGGACTACCCCTGGAATTCATGGCCAGTGCTATGGCAACATCAGTGACTTGGGCAA
GGGCGCCAGATGCCTGTCCACTACGGCTGCAAGGAACGCCACTTCGTCATCTCCTCTCCACTGGCC
ACGCAGATCCCTCAGGCGGTGGGGCGCGGTACGCAGCCAAGCGGGCCAATGCCAACAGGGTCGTATCT
GTTACTTCGGCGAGGGGGCAGCCAGTGAGGGGGACGCCATGCCGGCTTCAACTTCGCTGCCACACTTGA
GTGCCCATCATCTTCTCTGCCGGAACAATGGCTACGCCATCTCCACGCCACCTCTGAGCAGTATCGC
GGCGATGGCATTGCAGCACGAGGCCCGGGTATGGCATCATGTCAATCCGCGTGGATGGTAAATGATGTGT
TTGCCGTATAACAACGCCACAAAGGAGGCCCGACGGCGGGCTGTGGCAGAGAACCAGCCCTTCCTCATCGA
GGCCATGACCTACAGGATCGGGCACACAGCACCAGTGACGACAGTTTCCGCGTACCGCTCGGTGGATGAG
GTCAATTACTGGGATAAACAGGACCACCCCATCTCCCGGCTGCGGCACTATCTGCTGAGCCAAGGCTGGT
GGGATGAGGAGCAGGAGAAGGCCTGGAGGAAGCAGTCCCGCAGGAAGGTGATGGAGGCCCTTTGAGCAGGC
CGAGCGGAAGCCAAACCCAAACCCAACTACTTCTCAGACGTGTATCAGGAGATGCCCGCCAGCTC
CGCAAGCAGCAGGAGTCTCTGGCCCGCCACCTGCAGACCTACGGGGAGCACTACCCACTGGATCACTTCG
ATAAGTGA
```



[View online »](#)

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000709 unedited
 AATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGTAGCGATCGCTGCAGCGA
 GGGTCTGGCGGCTAAACCGTGGTTTGGCCAGGCTGCCCTCTGCTGCTGCGGCAGCCTG
 GGGCTCGGGGACTGGCTAGATCTCACCCCCAGGCAGCAGCAGTTCATCTCTGG
 ATGACAAGCCCCAGTCCCAGGGGCTCGGCGGAGTTTATAGATAAGTTGGAATTCATCC
 AGCCCAACGTATCTCTGGAATCCCCATCTACCGCGTCATGGACCGCAAGGCCAGATCA
 TCAACCCAGCGAGGACCCACCTGCCGAAGGAGAAGGTGCTGAAGCTCTACAAGAGCA
 TGACACTGCTTAACACCATGGACCGCATCCTCTATGAGTCTCAGCGGCAGGGCCGGATCT
 CCTTCTACATGACCAACTATGGTGAGGAGGGCACGCACGTGGGGAGTGCCGCCGCCCTGG
 ACAACACGGACCTGGTGTGGCCAGTACCGGGAGGCAGGTGTGCTGATGTATCGGGACT
 ACCCCCTGGAATTTATGGCCAGTGTATGGCAACATCAGTGACTTGGGCAAGGGGC
 GCCAGATGCTGTCCACTACGGCTGNCAGGAACGCCACTTCGTCATATCTCTCTCCAC
 TGGCCACGCAGATCCCTCAGGCGGGTGGGGCGGGCTACGCAGCAAGCGGGCAATGCC
 AACAGGGNTCGTCATCTGGTACTTCNGCGAGGGGGCAGCCAGTGAGGGGGACGCCATGCC
 NGCTTNCACCTTCGCTGCCACACTTGAGTGCCCCATCATCTTCTTCTTGGCCGACAAGGGN
 TACGCCATCTCCACGCCACCTCTGAGCAGTATCGCGCGCATGGCATTGCAGCACGAGGC
 CCCC GGATGGCATCATGTCATCCCGTGGATG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_000709 unedited
 TGACCGCGGCCGCTTTTAGGATCGAGTTTTTTTTTTTTTTTTTTTTTTTAAAAGCCAGCGCA
 GAGAGCAGTTTATTCGTGACCTCTGCTGGCCACTCGCACCTGCGCAAGTCCACAGGCTG
 ACCTGCCATGTCCACCCATGCCAGAGGGGCTTCTAGTCCTGAATGTGCCCTCACCCAG
 CCCCTGGGAGAAGGCACTGTAACAACAGGTGAAGAGGGGGCTGACGGAGCCACAGCAACT
 GCTGCAGATGCTGCCCCGACAATGTAACAGCCGGGAGGAGCAGGGGTGAAGAGTGGCA
 GCCGCCCTGGCCGCTGAGTATTTAGAGGGAGCTGACTGGGGAAGACAGTGGTGTGCTGT
 CAGGTCCCCTGCTCCCCTTAGAGTGGGGTACCTCTCGGGGTAGCTGAGGATGGGTGGG
 GGTGGGCTGAGCAGGTCTCACTTATCGAAGTATCCAGTGGGTAGTGTCCCCGTAGGTC
 TGCAGGTGGCGGGCCAGAGACTCCTGCTGCTTGCAGGAGCTGGGCGGGCATCTCCTGATAC
 ACGTCTGAGAAGAGCAGGTTGGGGTTGGGTTGGGCTTCCGCTCGGCCTGCTCAAAGGCC
 TCCATCACCTTCTGCGGACTGCTTCTCCAGGCCTTCTCCTGCTCCTCATCCCACCAG
 NCCTTGGCTCACAGATAGTGCCGACCGGGAGATGGGGTGGCCCTGTTTATCCCATTA
 TTTGACCTCATCCACCGAGCGGTACGCTGAACTGCCGTCAGTGGTGTGCGGTGCCCGAT
 CCCTGTAGTCATGCCTCGAGACAAAGGTCTGGTTTCTGCCAGCCCGCCGTGGGCCTCTT
 TGGGGGCTGTTACCGAAAACCTTTACCTCCCCGGATTGACTGATGCCTACCCGGGGC
 TCGGCT

Restriction Sites:

NotI-NotI

ACCN:

NM_000709

Insert Size:

1870 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

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_000709.2](#), [NP_000700.1](#)

RefSeq Size: 1791 bp

RefSeq ORF: 1791 bp

Locus ID: 593

UniProt ID: [P12694](#)

Cytogenetics: 19q13.2

Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Valine, leucine and isoleucine degradation

Gene Summary:

The branched-chain alpha-keto acid (BCAA) dehydrogenase (BCKD) complex is an inner mitochondrial enzyme complex that catalyzes the second major step in the catabolism of the branched-chain amino acids leucine, isoleucine, and valine. The BCKD complex consists of three catalytic components: a heterotetrameric (alpha2-beta2) branched-chain alpha-keto acid decarboxylase (E1), a dihydrolipoyl transacylase (E2), and a dihydrolipoamide dehydrogenase (E3). This gene encodes the alpha subunit of the decarboxylase (E1) component. Mutations in this gene result in maple syrup urine disease, type IA. Multiple transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Sep 2009]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1).