

## Product datasheet for **SC108972**

### **BCKDHB (NM\_000056) Human Untagged Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	BCKDHB (NM_000056) Human Untagged Clone
Tag:	Tag Free
Symbol:	BCKDHB
Synonyms:	BCKDE1B; BCKDH E1-beta; E1B
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_000056, the custom clone sequence may differ by one or more nucleotides

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ATGGCGTTGTAGCGCGGCTGCCGGCTGGCTACTCAGGCTCAGGGCGGCAGGGGCTGAGGGCACTGGC
GTCGGCTTCTGGCGCGGGGCTGGCGCGGGGCTTTTTGCACCCCGCCGCGACTGTCGAGGATGCGGCCCA
GAGGCGGCAGGTGGCTCATTTTACTTTCCAGCCAGATCCGGAGCCCCGGGAGTACGGGCAAACCTCAGAAA
ATGAATCTTTCCAGTCTGTAACAAGTGCCTTGGATAACTCATTGGCCAAAGATCCTACTGCAGTAATAT
TTGGTGAAGATGTTGCCTTTGGTGGAGTCTTTAGATGCACTGTTGGCTTGCAGACAAATATGGAAAAGA
TAGAGTTTTTAATACCCATTGTGTGAACAAGGAATTGTTGGATTGGAATCGGAATTGCGGTCCTGGA
GCTACTGCCATTGCGGAAATTCAGTTTGCAGATTATTTTTCCCTGCATTGATCAGATTGTTAATGAAG
CTGCCAAGTATCGCTATCGCTCTGGGGATCTTTTTAACTGTGGAAGCCTCACTATCCGGTCCCCTTGGGG
CTGTGTTGGTCATGGGGCTCTCTATCATTCTCAGAGTCCTGAAGCATTTTTTGCCATTGCCAGGAATC
AAGGTGTTATACCCAGAAGCCCTTTCCAGGCCAAAGGACTTCTTTTGCATGCATAGAGGATAAAAATC
CTTGATATTTTTTGAACCTAAAATACTTTACAGGGCAGCAGCGGAAGAAGTCCCTATAGAACCATACAA
CATCCCCTGTCCAGGCCGAAGTCATACAGGAAGGGAGTGATGTTACTCTAGTTGCCTGGGGCACTCAG
GTTTCATGTGATCCGAGAGGTAGCTTCCATGGCAAAAAGAAAGCTTGGAGTGTCTGTGAAGTCATTGATC
TGAGGACTATAATACCTTGGGATGTGGACACAATTTGTAAGTCTGTGATCAAAACAGGGCGACTGCTAAT
CAGTCACGAGGCTCCCTTGACAGGCGGCTTTGCATCGGAAATCAGCTCTACAGTTCAGGAGGAATGTTTC
TTGAACCTAGAGGCTCCTATATCAAGAGTATGTGGTTATGACACACCATTTCCTCACATTTTTGAACCAT
TCTACATCCCAGACAAATGGAAGTGTATGATGCCCTTCGAAAAATGATCAACTATTGA
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<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_000056 unedited            ATTTTGTAAACCGACTTTCTATAGGCGGCCGCGCATTTCGGCACGAGGGCGGGGATGGCGG            TTGTAGCGGGCGCTGCCGGCTGGCTACTCAGGCTCAGGGCGGCAGGGGCTGAGGGGCACT            GGGCTCGGCTTCTGGCGCGGGGCTGGCGCGGGGCTTTTTGCACCCCGCCGCGACTGTGC            AGGATGCGGCCAGAGGGCGGCAGGGCAAACCTCAGAAAAATGAATCTTTCCAGTCTGTAAC            AAGTGCCTTGGATAACTCATTGGCCAAAGATCCTACTGCAGTAATATTTGGTGAAGATG            TGCCCTTTGGTGGAGTCTTTAGATGCACCTGTTGGCTTGCAGACAAATATGAAAAAGATG            AGTTTTTAATACCCATTGTGTGAACAAGGAATTGTTGGATTTGGAATCGGAATTGCGGT            CACTGGAGCTACTGCCATTGCGGAAATTCAGTTTGCAGATTATATTTCCCTGCATTTGA            TCAGATTGTTAATGAAGCTGCCAAGTATCGCTATCGCTCTGGGGATCTTTTTAACTGTGG            AAGCCTCACTATCCGGTCCCCTTGGGGCTGTGTTGGTCATGGGGCTCTCTATCATTCTCA            GAGTCTGAAGCATTTTTGCCATTGCCAGGAATCAAGGTGTTATACCCAGAAGCCC            TTTNCAGCCAAAGGACTCTTTTGTGCATAGAGGATAAAAAATCCTGTATATTTTT            TGGACCTAANATACTTTACAGGGCAGCAGCGAAAGAGTNCCTATAGAACCATAACAAT            CCCACTGTCCCAGNCCGAAGTCATACAGGAAGGGAGTGATGNNTACTCTAGTGCCTGGGG            GCACTCAGNTCATGTGATCCGAGAGGTAGCTTCCATGGCANAAGAAAGCTNGGAGTGTC</p>
<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_000056 unedited            CGGGCCGCAATCTAGNATCGAGTTTTTTTTTTTTTTTTTTTGACAATTTGATTTTACTTTATT            GAATACTATCACACATAAATTTACAGATGTAATTAACAGAATTTATAAGATTACCA            TGTGGAATATTTTTCAAAGTAACTCTGAAACTCTTAATGAAAATCATCAATACATGTGTG            TTACAATAACAATAATAGAATGTAGAACTTTTCAGCCAATATCATGATGGTTCATTTAATA            AAAACTCTTTTTCAAAAAGAGGTAAGTCGGAGGAAATATAAAAAAAATTCAGAAAAAA            TATTTCCATATCTAGTCATAATCTCCAGCTTTTCTGAAAATAAATTATAGACTTTCTC            AATTGCATACATGACTATTTTCTAAATACCATATTTAACTTTTAGCATATTGGAGTTGT            TTTTCTTTTATCGTATTTTACAGCATAGGTTTAAATGTTTTTCTTATGTTTCAAAAGGAAT            ACATAATCTAAATTTAAACCACATCTGAATATTACTTTAAAAATAGCAACGAGGCACGT            GGCCACCATCACTACCTTGGCTCTTTATTACGGCTGGTCCACGGAAGGGAACCACATGGA            CAACAAAAGTGAGGGAGTCCCTAACCAGTCTAAGTGTGATTTATTGTAGATGCCAGTT            GCTTTCACAGACATTAAGAAGACATCAGANATATGGCATCTACACCGGTATGTCTGAGAG            ATACACGCATCTGTGGGCTAATGGTCCTAACTTCCATCTATAACANTATTCTTAGACTAG            AACAGACAGAAAATGTNAGGATTATGTAGCACAGTGACTATGAGGGAGAGACTACTCTCTA            TCCGACAATGTAAGGCGTTCACTCTGATTTTACAGGAGCTAGATTACTACCATAACAAGT            CAGAATCTAGCTTTCTGACTTTAAAGNNAAGATGTGCTTTTTTCAGAGTGATTTGCT</p>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_000056
<b>Insert Size:</b>	3340 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_000056.2, NP_000047.1</u>
<b>RefSeq Size:</b>	1552 bp
<b>RefSeq ORF:</b>	1179 bp
<b>Locus ID:</b>	594
<b>UniProt ID:</b>	<u>P21953</u>
<b>Cytogenetics:</b>	6q14.1
<b>Domains:</b>	transket_pyr, transketolase_C
<b>Protein Pathways:</b>	Metabolic pathways, Valine, leucine and isoleucine degradation
<b>Gene Summary:</b>	<p>This gene encodes the E1 beta subunit of branched-chain keto acid dehydrogenase, which is a multienzyme complex associated with the inner membrane of mitochondria. This enzyme complex functions in the catabolism of branched-chain amino acids. Mutations in this gene have been associated with maple syrup urine disease (MSUD), type 1B, a disease characterized by a maple syrup odor to the urine in addition to mental and physical retardation and feeding problems. Alternative splicing at this locus results in multiple transcript variants. [provided by RefSeq, Jan 2016]</p> <p>Transcript Variant: This variant (2) lacks an alternate segment in the 3' UTR compared to transcript variant 1. Both variants 1 and 2 encode the same protein (isoform 1).</p>