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Product datasheet for RC218846

BCKDHB (NM_000056) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BCKDHB (NM_000056) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BCKDHB
Synonyms:	BCKDE1B; BCKDH E1-beta; E1B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC218846 representing NM_000056
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGTTGTAGCGGCGGCTGCCGGCTGGCTACTCAGGCTCAGGGCGGCAGGGGCTGAGGGGCACTGGC
GTCGGCTTCCTGGCGCGGGGCTGGCGCGGGGCTTTTTGCACCCCGCCGCGACTGTCGAGGATGCGGCCCA
GAGGCGGCAGGTGGCTCATTTTACTTTCCAGCCAGATCCGGAGCCCCGGGAGTACGGGCAAACTCAGAAA
ATGAATCTTTTCCAGTCTGTAACAAGTGCCTTGGATAACTCATTGGCCAAAGATCCTACTGCAGTAATAT
TTGGTGAAGATGTTGCCTTTGGTGGAGTCTTTAGATGCACTGTTGGCTTGCGAGACAAATATGGAAAAGA
TAGAGTTTTTAATACCCCATTGTGTGAACAAGGAATTGTTGGATTTGGAATCGGAATTGCGGTCACTGGA
GCTACTGCCATTGCGGAAATTCAGTTTGCAGATTATATTTTCCCTGCATTTGATCAGATTGTTAATGAAG
CTGCCAAGTATCGCTATCGCTCTGGGGATCTTTTTAACTGTGGAAGCCTCACTATCCGGTCCCCTTGGGG
CTGTGTTGGTCATGGGGCTCTCTATCATTCTCAGAGTCCTGAAGCATTTTTTGCCCATTGCCCAGGAATC
AAGGTGGTTATACCCAGAAGCCCTTTCCAGGCCAAAGGACTTCTTTTGTCATGCATAGAGGATAAAAATC
CTTGTATATTTTTTGAACCTAAAATACTTTACAGGGCAGCAGCGGAAGAAGTCCCTATAGAACCATACAA
CATCCCACTGTCCCAGGCCGAAGTCATACAGGAAGGGAGTGATGTTACTCTAGTTGCCTGGGGCACTCAG
GTTCATGTGATCCGAGAGGTAGCTTCCATGGCAAAAGAAAAGCTTGGAGTGTCTTGTGAAGTCATTGATC
TGAGGACTATAATACCTTGGGATGTGGACACAATTTGTAAGTCTGTGATCAAAACAGGGCGACTGCTAAT
CAGTCACGAGGCTCCCTTGACAGGCGGCTTTGCATCGGAAATCAGCTCTACAGTTCAGGAGGAATGTTTC
TTGAACCTAGAGGCTCCTATATCAAGAGTATGTGGTTATGACACACCATTTCCTCACATTTTTGAACCAT
TCTACATCCCAGACAAATGGAAGTGTTATGATGCCCTTCGAAAAATGATCAACTAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC218846 representing NM_000056
Red=Cloning site Green=Tags(s)

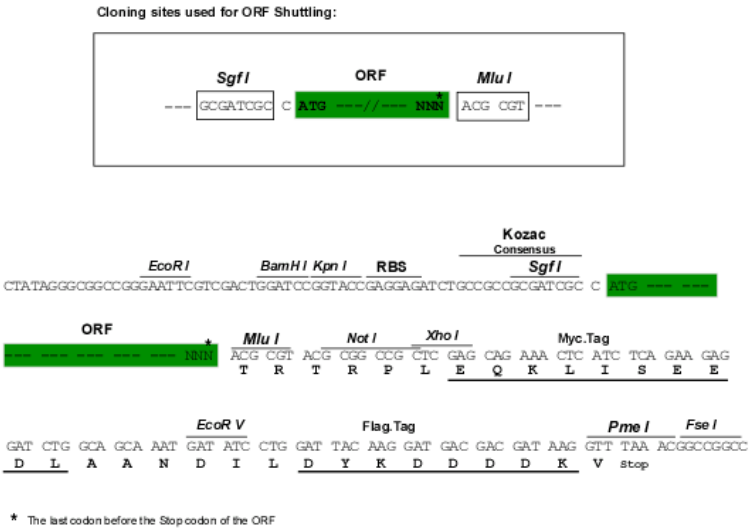
MAVVAAAAGWLLRLRAAGAEGHWRRLPGAGLARGFLHPAATVEDAAQRRQVAHFTFQPDPEPREYGQTQK
MNLFQSVTSALDNSLAKDPTAVIFGEDVAFGGVFRCTVGLRDKYGKDRVFNTPLCEQGIVGFGIGIAVTG
ATAIAEIQFADYIFPAFDQIVNEAAKYRYRSGDLFNCGSLTIRSPWGCVGHGALYHSQSPEAFFAHCPGI
KVVIPRSPFQAKGLLLSCIEDKNPCIFFEPKILYRAAAEEVPIEPYNIPLSQAEVIQEGSDVTLVAWGTQ
VHVIREVASMAKEKLGVSCEVIDLRTIIPWDVDTICKSVIKTGRLLISHEAPLTGGFASEISSTVQEECF
LNLEAPISRVCGYDTPFPHIFEPFYIPDKWKCYDALRKMINY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6338_h04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000056

ORF Size: 1176 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_000056.4

RefSeq Size: 1552 bp

RefSeq ORF: 1179 bp

Locus ID: 594

UniProt ID: P21953

Cytogenetics: 6q14.1

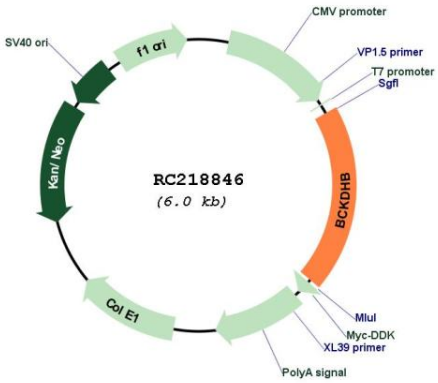
Domains: transket_pyr, transketolase_C

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

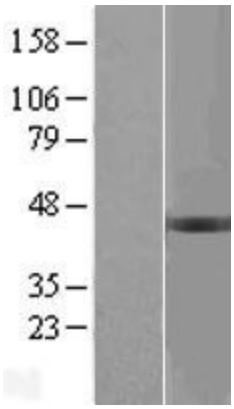
MW: 43.12 kDa

Gene Summary: 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]

Product images:



Circular map for RC218846



Western blot validation of overexpression lysate (Cat# [LY400014]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218846 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).