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Product datasheet for RC203601

BCKDH kinase (BCKDK) (NM_005881) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BCKDH kinase (BCKDK) (NM_005881) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BCKDH kinase
Synonyms:	BCKDKD; BDK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC203601 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGATCCTGGCGTCGGTGCTGAGGAGCGGTCCCGGGGGCGGGCTTCCGCTCCGGCCCCTCCTGGGACCCG
CACTCGCGCTCCGGGCCCGCTCGACGTCGGCCACCGACACACACCACGTGGAGATGGCTCGGGAGCGCTC
CAAGACCGTCACCTCCTTTTACAACCAGTCGGCCATCGACGCGGCAGCGGAGAAGCCCTCAGTCCGCCTA
ACGCCCACCATGATGCTCTACGCTGGCCGCTCTCAGGACGGCAGCCACCTTCTGAAAAGTGCTCGGTACC
TGCAGCAAGAACTTCCAGTGAGGATTGCTCACCGCATCAAGGGCTTCCGCTGCCTTCCTTTCATCATTGG
CTGCAACCCCACCATACTGCACGTGCATGAGCTATATATCCGTGCCTTCCAGAAGCTGACAGACTTCCCT
CCGATCAAGGACCAGGCGGACGAGGCCCAGTACTGCCAGCTGGTGCGACAGCTGCTGGATGACCACAAGG
ATGTGGTGACCCTCTTGGCAGAGGGCCTACGTGAGAGCCGGAAGCACATAGAGGATGAAAAGCTCGTCCG
CTACTTCTTGGACAAGACGCTGACTTCGAGGCTTGGAATCCGCATGTTGGCCACGCATCACCTGGCGCTG
CATGAGGACAAGCCTGACTTTGTCGGCATCATCTGTACTCGTCTCTCACCAAAGAAGATTATTGAGAAGT
GGGTGGACTTTGCCAGACGCCTGTGTGAGCACAAGTATGGCAATGCGCCCCGTGTCCGCATCAATGGCCA
TGTGGCTGCCCGGTTCCCCTTCATCCCTATGCCACTGGACTACATCCTGCCGGAGCTGCTCAAGAATGCC
ATGAGAGCCACAATGGAGAGTCACCTAGACACTCCCTACAATGTCCCAGATGTGGTCATCACCATCGCCA
ACAATGATGTCGATCTGATCATCAGGATCTCAGACCGTGGTGGAGGAATCGCTCACAAAGATCTGGACCG
GGTCATGGACTACCACTTCACTACTGCTGAGGCCAGCACACAGGACCCCCGGATCAGCCCCCTCTTTGGC
CATCTGGACATGCATAGTGGCGCCCAGTCAGGACCCATGCACGGCTTTGGCTTCGGGTTGCCCACGTCAC
GGGCCTACGCGGAGTACCTCGGTGGGTCTCTGCAGCTGCAGTCCCTGCAGGGCATTGGCACGGACGTCTA
CCTGCGGCTCCGCCACATCGATGGCCGGGAGGAAAGCTTCCGGATC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC203601 protein sequence
Red=Cloning site Green=Tags(s)

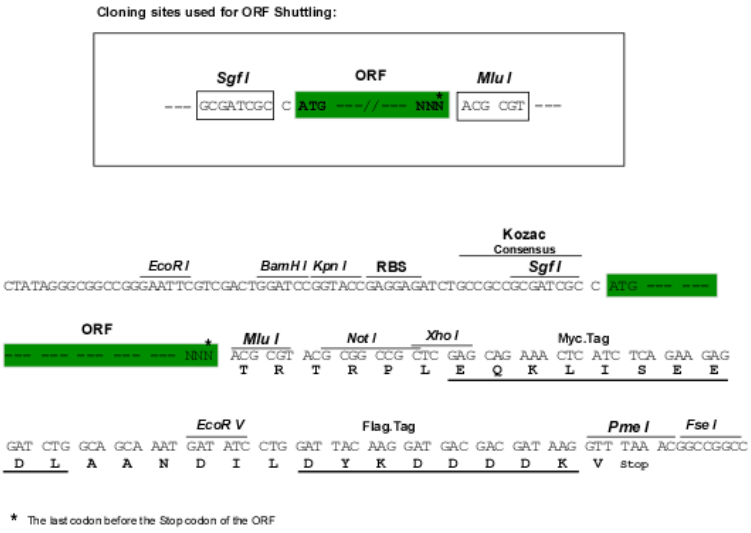
MILASVLRSGPGGGLPLRPLLGPALALRARSTSATDTHHVEMARERSKTVTSFYNQSAIDAAAEKPSVRL
TPTMMLYAGRSQDGSHLLKSARYLQQELPVRIAHRIKGFRCLPFIIGCNPTILHVHELYIRAFQKLTDFP
PIKDQADEAQYCQLVRQLLDDHKDVVTLLAEGLRESRKHIEDEKLVRYFLDKTLTSRLGIRMLATHHLAL
HEDKPDFVGIICTRLSPKKIIEKWVDFARRLCEHKYGNAPRVRINGHVAARFPFIPMPLDYILPELLKNA
MRATMESHLDTPYNVPDVVITIANNDVDLIIRISDRGGGIAHKDLDRVMDYHFTTAEASTQDPRISPLFG
HLDMHSGAQSGPMHGFGFGLPTSRAYAEYLGGSLQLQSLQGIGTDVYLRLRHIDGREESFRI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6078_h04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005881

ORF Size: 1236 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_005881.4

RefSeq Size: 2144 bp

RefSeq ORF: 1239 bp

Locus ID: 10295

UniProt ID: O14874

Cytogenetics: 16p11.2

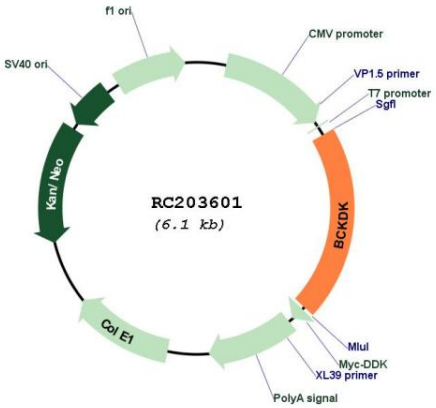
Domains: HATPase_c

Protein Families: Druggable Genome, Protein Kinase

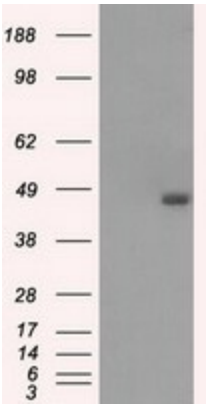
MW: 46.4 kDa

Gene Summary: The branched-chain alpha-ketoacid dehydrogenase complex (BCKD) is an important regulator of the valine, leucine, and isoleucine catabolic pathways. The protein encoded by this gene is found in the mitochondrion, where it phosphorylates and inactivates BCKD. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Dec 2012]

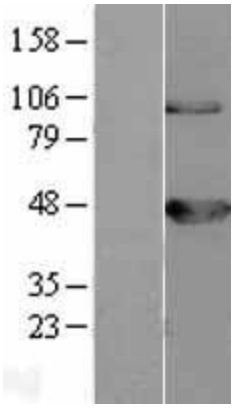
Product images:



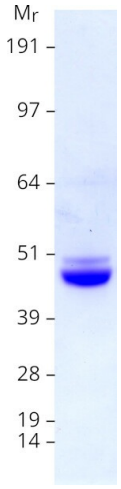
Circular map for RC203601



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY BCKDK (Cat# RC203601, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-BCKDK(Cat# [TA500685]). Positive lysates [LY401780] (100ug) and [LC401780] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401780]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203601 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified BCKDK protein (Cat# [TP303601]). The protein was produced from HEK293T cells transfected with BCKDK cDNA clone (Cat# RC203601) using MegaTran 2.0 (Cat# [TT210002]).