

Product datasheet for RC229972

BCAT1 (NM_001178094) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BCAT1 (NM_001178094) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BCAT1
Synonyms:	BCATC; BCT1; ECA39; MECA39; PNAS121; PP18
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC229972 representing NM_001178094 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGATTGCAGTAACGGATGCTCCGCAGAGTGTACCGAGAAGGAGGATCAAAGAGGTGGTGGGACTT
TTAAGGCTAAAGACCTAATAGTCACACCAGCTACCATTTAAAGGAAAAACCAGACCCCAATAATCTGGT
TTTTGGAAGTGTGTTACGGATCATATGCTGACGGTGGAGTGGTCTCAGAGTTGGATGGGAGAAACCT
CATATCAAGCCTCTTCAGAACCCTGTCATTGCACCCTGGCTCATCAGCTTGGCACTATGCAGTGAATTAT
TTGAAGGATTGAAGGCATTCGAGGAGTAGATAATAAAATTCGACTGTTTCAGCCAAACCTCAACATGGA
TAGAATGTATCGCTCTGCTGTGAGGGCAACTCTGCCGGTATTTGACAAAGAAGAGCTCTTAGAGTGTATT
CAACAGCTTGTGAAATTGGATCAAGAATGGGTCCCATATTC AACATCTGCTAGTCTGTATATTCGTCCTA
CATTCAATTGGAAGTGAAGCCTTCTCTTGGAGTCAAGAAGCCTACCAAAGCCTGCTCTTTGTACTCTTGAG
CCCAGTGGGACCTTATTTTTCAAGTGAACCTTTAATCCAGTGTCCCTGTGGGCAATCCCAAGTATGTA
AGAGCCTGGAAAGGTGGAAGTGGGACTGCAAGATGGGAGGGAATTACGGCTCATCTTTTTGCCCAAT
GTGAAGCAGTAGATAATGGGTGTCAGCAGGTCTGTGGCTCTATGGAGAGGACCATCAGATCACTGAAGT
GGAACTATGAATCTTTTTCTTTACTGGATAAAATGAAGATGGAGAAGAAGAACTGGCAACTCCTCCACTA
GATGGCATCATTCTCCAGGAGTGACAAGCGGTGCATTCTGGACCTGGCACATCAGTGGGTGAATTTA
AGGTGTCAGAGAGATACCTCACCATGGATGACTTGACAACAGCCCTGGAGGGGAACAGAGTGAGAGAGAT
GTTTGGCTCTGGTACAGCCTGTGTGTTTGCCAGTTTCTGATATACTGTACAAAGGCGAGACAATACAC
ATTCCAATATGGAGAATGGTCCTAAGCTGGCAAGCCGCATCTTGAGCAAATTAAGTATCCAGTATG
GAAGAGAAGAGAGCGACTGGACAATTGTCTATCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC229972 representing NM_001178094
Red=Cloning site Green=Tags(s)

MDCSNGCSAECTGEGGSKEVVGTFAKADLIVTPATILKEKPDNNLVFGTVFTDHMLTVEWSSEFGWEKP
 HIKPLQNLSLHPGSSALHYAVELFEGLKAFRGVDNKIRLFPNLNMDRMYRS AVRATLPVFDKEELLECI
 QQLVKLDQEWVPYSTASLYIRPTFIGTEPSLGVKKPTKALLFVLLSPVGPYFSSGTFNPVSLWANPKYV
 RAWKGGTGDCKMGGNYGSSLFAQCEAVDNGCQQVLWLYGEDHQITEVGTMMNLFYWINEDGEEELATPPL
 DGIILPGVTRRCILD.LLAHQWGEFKVSERYLTMDDLTTALEGNRVREMFSGGTACVVCPSDILYKGETIH
 IPTMENGPKLASRILSKLTDIQYGREESDWTIVLS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8076_g07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_001178094

ORF Size: 1155 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_001178094.2](#)

RefSeq ORF: 1158 bp

Locus ID: 586

UniProt ID: [P54687](#)

Cytogenetics: 12p12.1

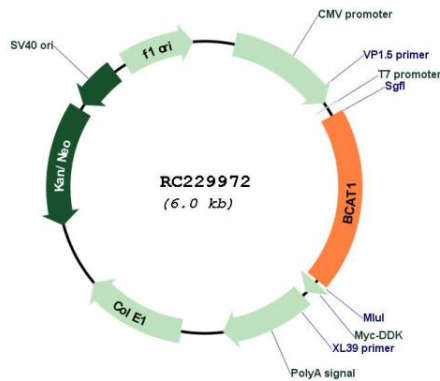
Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Pantothenate and CoA biosynthesis, Valine, leucine and isoleucine biosynthesis, Valine, leucine and isoleucine degradation

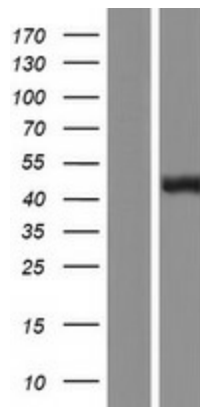
MW: 43.3 kDa

Gene Summary: This gene encodes the cytosolic form of the enzyme branched-chain amino acid transaminase. This enzyme catalyzes the reversible transamination of branched-chain alpha-keto acids to branched-chain L-amino acids essential for cell growth. Two different clinical disorders have been attributed to a defect of branched-chain amino acid transamination: hypervalinemia and hyperleucine-isoleucinemia. As there is also a gene encoding a mitochondrial form of this enzyme, mutations in either gene may contribute to these disorders. Alternatively spliced transcript variants have been described. [provided by RefSeq, May 2010]

Product images:



Circular map for RC229972



Western blot validation of overexpression lysate (Cat# [LY432972]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC229972 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).