OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC219229

BCAT1 (NM_005504) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BCAT1 (NM_005504) 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:

>RC219229 representing NM_005504
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAGGATTGCAGTAACGGATGCTCCGCAGAGTGTACCGGAGAAGGAGGATCAAAAGAGGTGGTGGGGA
CTTTTAAGGCTAAAGACCTAATAGTCACACCAGCTACCATTTTAAAGGAAAAACCAGACCCCAATAATCT
GGTTTTTGGAACTGTGTTCACGGATCATATGCTGACGGTGGAGTGGTCCTCAGAGTTTGGATGGGAGAAA
CCTCATATCAAGCCTCTTCAGAACCTGTCATTGCACCCTGGCTCATCAGCTTTGCACTATGCAGTGGAAT
TATTTGAAGGATTGAAGGCATTTCGAGGAGTAGATAATAAAATTCGACTGTTTCAGCCAAACCTCAACAT
GGATAGAATGTATCGCTCTGCTGTGAGGGCAACTCTGCCGGTATTTGACAAAGAAGAGCTCTTAGAGTGT
ATTCAACAGCTTGTGAAATTGGATCAAGAATGGGTCCCATATTCAACATCTGCTAGTCTGTATATTCGTC
CTACATTCATTGGAACTGAGCCTTCTCTTGGAGTCAAGAAGCCTACCAAAGCCCTGCTCTTTGTACTCTT
GAGCCCAGTGGGACCTTATTTTTCAAGTGGAACCTTTAATCCAGTGTCCCTGTGGGCCAATCCCAAGTAT
GTAAGAGCCTGGAAAGGTGGAACTGGGGACTGCAAGATGGGAGGGAATTACGGCTCATCTCTTTTTGCCC
AATGTGAAGCAGTAGATAATGGGTGTCAGCAGGTCCTGTGGCTCTATGGAGAGGACCATCAGATCACTGA
AGTGGGAACTATGAATCTTTTTCTTTACTGGATAAATGAAGATGGAGAAGAAGAACTGGCAACTCCTCCA
CTAGATGGCATCATTCTTCCAGGAGTGACAAGGCGGTGCATTCTGGACCTGGCACATCAGTGGGGTGAAT
TTAAGGTGTCAGAGAGATACCTCACCATGGATGACTTGACAACAGCCCTGGAGGGGAACAGAGTGAGAGA
GATGTTTGGCTCTGGTACAGCCTGTGTTGTTTGCCCAGTTTCTGATATACTGTACAAAGGCGAGACAATA
CACATTCCAACTATGGAGAATGGTCCTAAGCTGGCAAGCCGCATCTTGAGCAAATTAACTGATATCCAGT
ATGGAAGAGAAGAGAGCGACTGGACAATTGTGCTATCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

View online »

Protein Sequence:

>RC219229 representing NM_005504
Red=Cloning site Green=Tags(s)

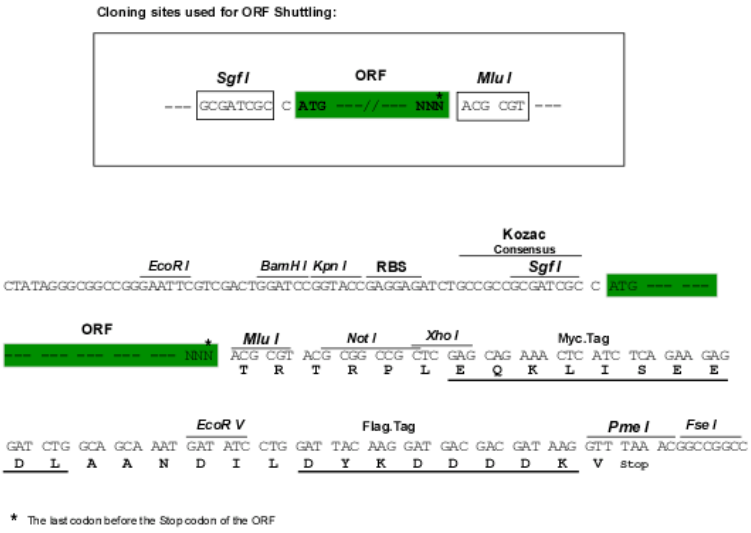
MKDCSNGCSAECTGEGGSKEVVGTFKAKDLIVTPATILKEKPDPNNLVFGTVFTDHMLTVEWSSEFGWEK
PHIKPLQNLSLHPGSSALHYAVELFEGLKAFRGVDNKIRLFQPNLNMDRMYRSAVRATLPVFDKEELLEC
IQQLVKLDQEWVPYSTSASLYIRPTFIGTEPSLGVKKPTKALLFVLLSPVGPYFSSGTFNPVSLWANPKY
VRAWKGGTGDCKMGGNYGSSLFAQCEAVDNGCQQVLWLYGEDHQITEVGTMNLFLYWINEDGEEELATPP
LDGIILPGVTRRCILDLAHQWGEFKVSERYLTMDDLTTALEGNRVREMFGSGTACVVCPVSDILYKGETI
HIPTMENGPKLASRILSKLTDIQYGREESDWTIVLS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

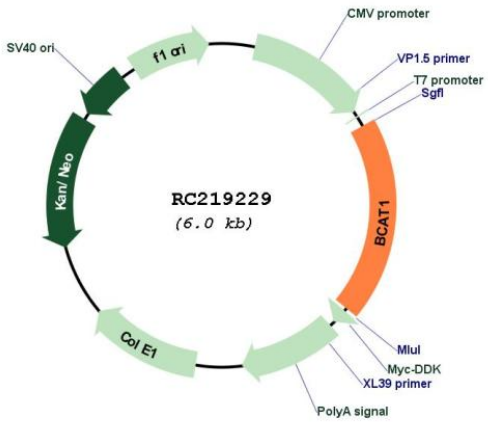
Chromatograms: https://cdn.origene.com/chromatograms/mk6049_g06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

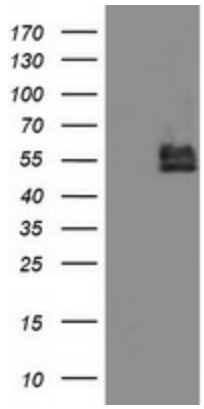


Plasmid Map:

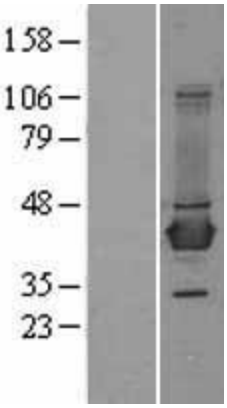


ACCN:	NM_005504
ORF Size:	1158 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own 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_005504.7
RefSeq Size:	8191 bp
RefSeq ORF:	1161 bp
Locus ID:	586
UniProt ID:	P54687
Cytogenetics:	12p12.1
Domains:	aminotran_4
Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Pantothenate and CoA biosynthesis, Valine, leucine and isoleucine biosynthesis, Valine, leucine and isoleucine degradation
MW:	42.8 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]

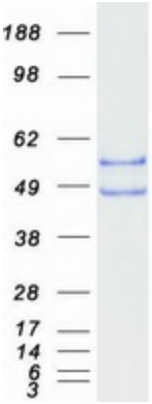
Product images:



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY BCAT1 (Cat# RC219229, 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-BCAT1(Cat# [TA504360]). Positive lysates [LY401683] (100ug) and [LC401683] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401683]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219229 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified BCAT1 protein (Cat# [TP319229]). The protein was produced from HEK293T cells transfected with BCAT1 cDNA clone (Cat# RC219229) using MegaTran 2.0 (Cat# [TT210002]).