

Product datasheet for **RC229891**

BCAT1 (NM_001178092) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: BCAT1 (NM_001178092) 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: >RC229891 representing NM_001178092
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGAAGGCTAAAGACCTAATAGTCACACCAGCTACCATTTAAAGGAAAAACCAGACCCCAATAATCTGG
 TTTTGGAACTGTGTTACGGATCATATGCTGACGGTGGAGTGGTCTCAGAGTTGGATGGGAGAAACC
 TCATATCAAGCCTCTTCAGAACCTGTCATTGCACCCTGGCTCATCAGCTTGCACATGCAGTGGAAAGTA
 TTTGACAAAGAAGAGCTTTAGAGTGTATTCAACAGCTTGTGAAATTGGATCAAGAAATGGTCCCATT
 CAACATCTGCTAGTCTGTATATTCGTCCTACATTCATTGGAAGTGGAGCTTCTCTGGAGTCAAGAAGCC
 TACCAAAGCCCTGCTCTTTGACTCTTGAGCCAGTGGGACCTTATTTTTCAAGTGGAACTTTAATCCA
 GTGTCCTGTGGGCAATCCCAAGTATGTAAGAGCCTGGAAAGGTGGAAGTGGGACTGCAAGATGGGAG
 GGAATTACGGCTCATCTTTTTGCCCAATGTGAAGCAGTAGATAATGGGTGTCAGCAGGTCTGTGGCT
 CTATGGAGAGGACCATCAGATCACTGAAGTGGAACTATGAATCTTTTTCTTTACTGGATAAATGAAGAT
 GGAGAAGAAGAACTGGCAACTCTCCACTAGATGGCATCATTCTCCAGGAGTGACAAGGCGGTGCATTC
 TGGACCTGGCACATCAGTGGGTGAATTAAGGTGTCAGAGAGATACCTACCATGGATGACTTGACAAC
 AGCCCTGGAGGGGAACAGAGTGAAGAGATGTTGGCTCTGGTACAGCCTGTGTTGTTGCCAGTTTCT
 GATATACTGTACAAAGGGGAGACAATACACATTCCAATATGGAGAATGGTCTAAGCTGGCAAGCCGCA
 TCTTGAGCAAATTAAGTATCCAGTATGGAAGAGAAGAGAGCGACTGGACAATTGTGCTATCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC229891 representing NM_001178092
Red=Cloning site Green=Tags(s)

MKAKDLIVTPATILKEKDPNNLVFGTVFDHMLTVEWSSEFGWEKPHIKPLQNLSLHPGSSALHYAVEV
 FDKEELLECIQQLVKLDQEWVPYSTSASLYIRPTFIGTEPSLVGKKPTKALLFVLLSPVGPYFSSGTFNP
 VSLWANPKYVRAWKGGTGDCMKMGNYGSSLFAQCEAVDNGCQQLWLYGEDHQITEVGTMMNLFYWINED
 GEEELATPPLDGIILPGVTRRCILDLAHQWGEFKVSERYLTMDDLTTALEGNRVREMFSGGTACVCPVS
 DILYKGETIHIPTMENGPKLASRILSKLTDIQYGREESDWTIVLS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001178092

ORF Size: 975 bp

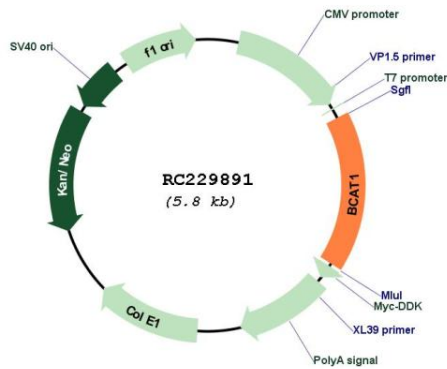
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

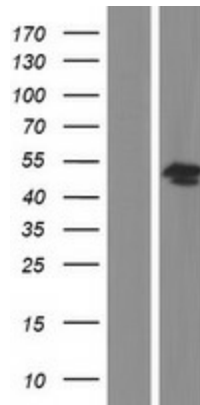
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<ol style="list-style-type: none">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_001178092.2
RefSeq ORF:	978 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:	36.7 kDa
Gene Summary:	<p>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]</p>

Product images:



Circular map for RC229891



Western blot validation of overexpression lysate (Cat# [LY432891]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC229891 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).