

Product datasheet for **RG219229**

BCAT1 (NM_005504) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BCAT1 (NM_005504) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	BCAT1
Synonyms:	BCATC; BCT1; ECA39; MECA39; PNAS121; PP18
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG219229 representing NM_005504 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAAGGATTGCAGTAACGGATGCTCCGCAGAGTGTACCGGAGAAGGAGGATCAAAGAGGTGGTGGGA
CTTTAAAGGCTAAAGACCTAATAGTCACACCAGCTACCATTTAAAGGAAAAACCAGACCCCAATAATCT
GGTTTTTGGAACTGTGTTACGGATCATATGCTGACGGTGGAGTGGTCTCAGAGTTGGATGGGAGAAA
CCTCATATCAAGCCTCTCAGAACCTGTCATTGCACCCTGGCTCATCAGCTTTGCACTATGCAGTGAAT
TATTTGAAGGATTGAAGGCATTTGAGGAGTAGATAATAAAATTCGACTGTTTCAGCCAAACCTCAACAT
GGATAGAATGTATCGCTCTGCTGTGAGGGCAACTCTGCCGGTATTTGACAAAGAAGAGCTCTTAGAGTGT
ATCAACAGCTTGTGAAATTGGATCAAGAATGGGTCCCATATTCACATCTGCTAGTCTGTATATTCGTC
CTACATTCATTGGAAGTGAAGCTTCTCTTGGAGTCAAGAAGCCTACCAAAGCCCTGCTCTTTGACTCTT
GAGCCAGTGGGACCTTATTTTCAAGTGAACCTTTAATCCAGTGTCCCTGTGGCCAAATCCCAAGTAT
GTAAGAGCCTGGAAGGTGGAAGTGGGACTGCAAGATGGGAGGGAATTACGGCTCATCTTTTTGCC
AATGTGAAGCAGTAGATAATGGGTGTCAGCAGGTCCTGTGGCTCTATGGAGAGGACCATCAGATCACTGA
AGTGGAACTATGAATCTTTTCTTTACTGGATAAATGAAGATGGAGAAGAAGAACTGGCAACTCCTCCA
CTAGATGGCATCATTCTCCAGGAGTGACAAGGCGGTGCATTCTGGACCTGGCACATCAGTGGGTGAAT
TTAAGGTGTGAGAGAGATACCTACCATGGATGACTTGACAACAGCCCTGGAGGGGAACAGAGTGAGAGA
GATGTTTGGCTCTGGTACAGCCTGTGTTGTTTGGCCAGTTTCTGATATACTGTACAAAGCGAGACAATA
CACATTCCAATATGGAGAATGGTCTAAGCTGGCAAGCCGCATCTTGAGCAAATTAAGTATATCCAGT
ATGGAAGAGAAGAGAGCGACTGGACAATTGTGCTATCC

ACCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG219229 representing NM_005504
 Red=Cloning site Green=Tags(s)

MKDCSNGCSAECTGEGGSKEVVGTFKAKDLIVTPATILKEKDPNNLVFGTVFTDHMLTVEWSSEFGWEK
 PHIKPLQNLSLHPGSSALHYAVELFEGLKAFRGVDNKIRLFQPNLNMDRMYRS AVRATLPVFDKEELLE
 IQQLVKLDQEWVPYSTASLYIRPTFIGTEPSLGVKKPTKALLFVLLSPVGPYFSSGTFNPVSLWANPKY
 VRAWKGGTDGCKMGGNYGSSLFAQCEAVDNGCQQVLWL YGEDHQITEVGTMMNLFYWINEDGEEELATPP
 LDGIILPGVTRRCILDLAHQWGEFKVSERYLTMDLTTALEGNRVREMFSGGTACVVCVSDILYKGETI
 HIPTMENGPKLASRILSKLTDIQYGRESDWTIVLS

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



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

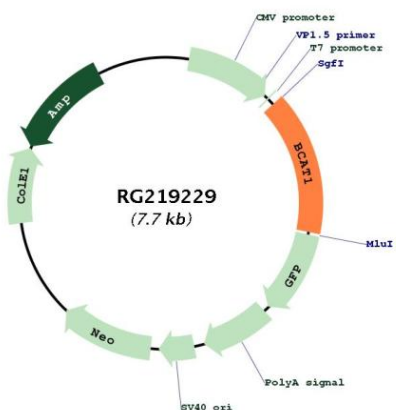
Domains: aminotran_4

Protein Families: Druggable Genome

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

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 RG219229