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Product datasheet for RG229891

BCAT1 (NM_001178092) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BCAT1 (NM_001178092) 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:

>RG229891 representing NM_001178092
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAGGCTAAAGACCTAATAGTCACACCAGCTACCATTTTAAAGGAAAAACCAGACCCCAATAATCTGG
TTTTTGGAACTGTGTTCACGGATCATATGCTGACGGTGGAGTGGTCCTCAGAGTTTGGATGGGAGAAACC
TCATATCAAGCCTCTTCAGAACCTGTCATTGCACCCTGGCTCATCAGCTTTGCACTATGCAGTGGAAGTA
TTTGACAAAGAAGAGCTCTTAGAGTGTATTCAACAGCTTGTGAAATTGGATCAAGAATGGGTCCCATATT
CAACATCTGCTAGTCTGTATATTCGTCCTACATTCATTGGAACTGAGCCTTCTCTTGGAGTCAAGAAGCC
TACCAAAGCCCTGCTCTTTGTACTCTTGAGCCCAGTGGGACCTTATTTTTCAAGTGGAACCTTTAATCCA
GTGTCCCTGTGGGCCAATCCCAAGTATGTAAGAGCCTGGAAAGGTGGAACTGGGGACTGCAAGATGGGAG
GGAATTACGGCTCATCTCTTTTTGCCCAATGTGAAGCAGTAGATAATGGGTGTCAGCAGGTCCTGTGGCT
CTATGGAGAGGACCATCAGATCACTGAAGTGGGAACTATGAATCTTTTTCTTTACTGGATAAATGAAGAT
GGAGAAGAAGAACTGGCAACTCCTCCACTAGATGGCATCATTCTTCCAGGAGTGACAAGGCGGTGCATTC
TGGACCTGGCACATCAGTGGGGTGAATTTAAGGTGTCAGAGAGATACCTCACCATGGATGACTTGACAAC
AGCCCTGGAGGGGAACAGAGTGAGAGAGATGTTTGGCTCTGGTACAGCCTGTGTTGTTTGCCCAGTTTCT
GATATACTGTACAAAGGCGAGACAATACACATTCCAACTATGGAGAATGGTCCTAAGCTGGCAAGCCGCA
TCTTGAGCAAATTAACTGATATCCAGTATGGAAGAGAAGAGAGCGACTGGACAATTGTGCTATCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

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Protein Sequence:

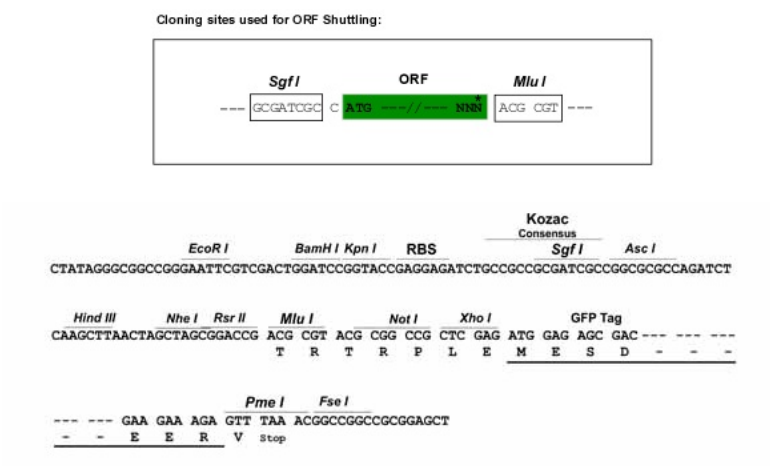
>RG229891 representing NM_001178092
Red=Cloning site Green=Tags(s)

MKAKDLIVTPATILKEKPDPNNLVFGTVFTDHMLTVEWSSEFGWEKPHIKPLQNLSLHPGSSALHYAVEV
FDKEELLECIQQLVKLDQEWVPYSTSASLYIRPTFIGTEPSLGVKKPTKALLFVLLSPVGPYFSSGTFNP
VSLWANPKYVRAWKGGTGDCKMGGNYGSSLFAQCEAVDNGCQQVLWLYGEDHQITEVGTMNLFLYWINED
GEEELATPPLDGIILPGVTRRCILDLAHQWGEFKVSERYLTMDDLTTALEGNRVREMFGSGTACVVCPVS
DILYKGETIHIPTMENGPKLASRILSKLTDIQYGREESDWTIVLS

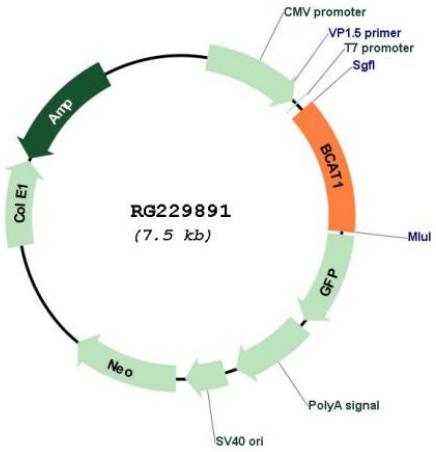
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



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:	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 Size:	9499 bp
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
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]