

Product Name: KD-Validated BCAT1 Mouse Monoclonal Antibody**Catalog #: KVA00589**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Mouse
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,M
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Mouse IgG2a
Clonality	Mouse mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 43.0kDa

Antigen Information

Gene Name	BCAT1
Alternative Names	BCAT1; Branched Chain Amino Acid Transaminase 1; BCATc; BCT1; Branched-Chain-Amino-Acid Aminotransferase, Cytosolic; Branched Chain Aminotransferase 1, Cytosolic; EC 2.6.1.42; ECA39; Branched Chain Amino-Acid Transaminase 1, Cytosolic; Placental Protein 18; Protein ECA39; PNAS121; BCAT(C); MECA39; PP18
Gene ID	586.0
SwissProt ID	P54687
Immunogen	Recombinant protein of human BCAT1

Background

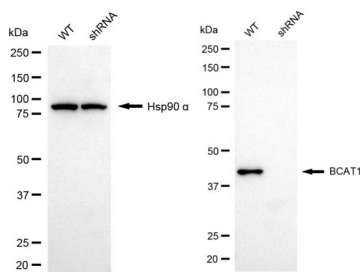
This gene encodes the cytosolic form of the enzyme branched-chain amino acid transaminase. This enzyme catalyzes the

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]

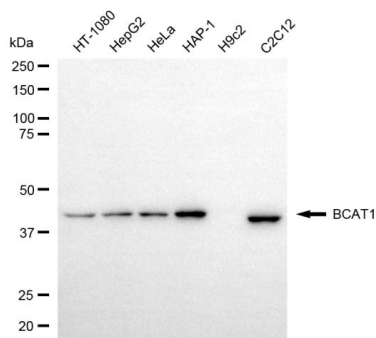
Research Area

Signal Transduction, Metabolism

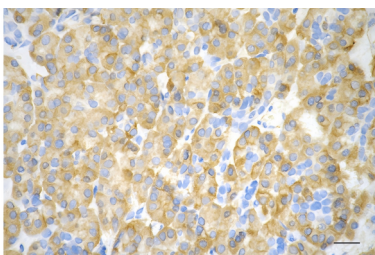
Image Data



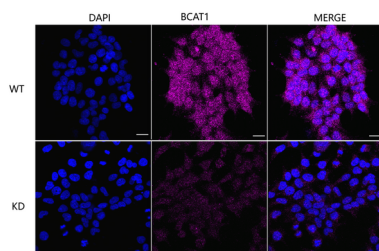
Western blotting analysis using BCAT1 antibody (KVA00589). BCAT1 expression in wild type (WT) and BCAT1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with BCAT1 antibody (KVA00589, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody (APS0631, 1:10,000) respectively.



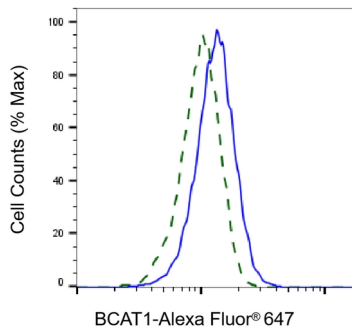
Western blotting analysis using BCAT1 antibody (KVA00589). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with BCAT1 antibody (KVA00589, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody (APS0631, 1:10,000) respectively.



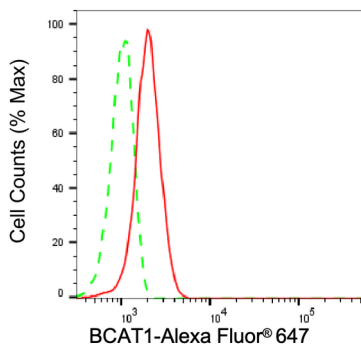
Immunohistochemistry was performed on paraffin-embedded human pancreatic adenocarcinoma using BCAT1 antibody (KVA00589, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



Immunocytochemical staining of HeLa cells using BCAT1 antibody (KVA00589, 1:1,000). Top panel: wild-type (WT); Bottom panel: BCAT1 shRNA knockdown (KD). Nuclei were stained blue with DAPI; BCAT1 was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm.



Validation of BCAT1 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with BCAT1 antibody (KVA00589, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of BCAT1 expression in C2C12 cells using BCAT1 antibody (KVA00589, 1:1,000). Green, isotype control; red, BCAT1.