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BCKDK Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP7112a

Specification

BCKDK Antibody (Center) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	O14874
Other Accession	Q00972, O55028
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
Calculated MW	**46360**
Antigen Region	**120-151**

BCKDK Antibody (Center) - Additional Information

Gene ID 10295

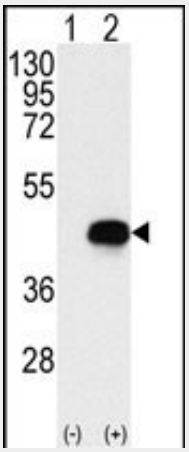
Other Names
[3-methyl-2-oxobutanoate dehydrogenase [lipoamide]] kinase, mitochondrial, Branched-chain alpha-ketoacid dehydrogenase kinase, BCKD-kinase, BCKDHKIN, BCKDK

Target/Specificity
This BCKDK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 120-151 amino acids from the Central region of human BCKDK.

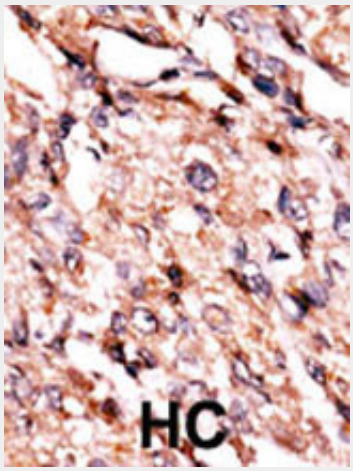
Dilution
WB~~1:1000
IHC-P~~1:50~100

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.



Western blot analysis of BCKDK (arrow) using rabbit polyclonal BCKDK Antibody (Center) (Cat.#AP7112a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the BCKDK gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

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Precautions
BCKDK Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

BCKDK Antibody (Center) - Protein Information

Name BCKDK

Function
Catalyzes the phosphorylation and inactivation of the branched-chain alpha-ketoacid dehydrogenase complex, the key regulatory enzyme of the valine, leucine and isoleucine catabolic pathways. Key enzyme that regulate the activity state of the BCKD complex.

Cellular Location
Mitochondrion matrix. Mitochondrion

Tissue Location
Ubiquitous.

BCKDK Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BCKDK Antibody (Center) - Background

The second major step in the catabolism of the branched-chain amino acids, isoleucine, leucine, and valine, is irreversibly catalyzed by the branched-chain alpha-keto acid dehydrogenase complex (BCKD), an inner-mitochondrial enzyme complex composed of 3 catalytic components: a branched-chain alpha-keto acid decarboxylase (E1), a dihydrolipoyl transacylase (E2), and a dihydrolipoamide dehydrogenase (E3). The complex also contains 2 enzymes that regulated the state of activity of the BCKD complex: a kinase (BCKDK), and a phosphorylase. The ubiquitiously expressed kinase contains 1 histidine kinase domain. Maple syrup urine disease (MSUD) is a pathology secondary to an enzyme defect in the catabolic pathway of leucine, isoleucine, and valine. Accumulation of these amino acids and their corresponding keto acids results in encephalopathy and progressive neurodegeneration in infants not treated for MSUD.

BCKDK Antibody (Center) - References

Chang, C.F., et al., J. Biol. Chem. 277(18):15865-15873 (2002).
Popov, K.M., et al., J. Biol. Chem. 267(19):13127-13130 (1992).
Zneimer, S.M., et al., Genomics 10(3):740-747 (1991).