

**Phospho-BCKDH-E1 α (Ser293) (E2V6B)
Rabbit mAb****Orders:** 877-616-CELL (2355)
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	49	Rabbit IgG	#P12694	593

Product Usage Information**Application**Western Blotting
Immunoprecipitation**Dilution**1:1000
1:50**Storage**Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.**Specificity/Sensitivity**Phospho-BCKDH-E1 α (Ser293) (E2V6B) Rabbit mAb recognizes endogenous levels of BCKDH-E1 α protein only when phosphorylated at Ser292 of mature human BCKDH-E1 α , Ser293 of mature mouse BCKDH-E1 α , or Ser293 of mature rat BCKDH-E1 α .**Source / Purification**Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser292 of mature human BCKDH-E1 α protein, which corresponds to Ser293 of mature mouse BCKDH-E1 α protein and Ser293 of mature rat BCKDH-E1 α protein.**Background**Branched-chain amino acids (BCAAs) leucine, isoleucine, and valine are essential amino acids in mammals, but elevated levels of BCAAs have been implicated in cardiovascular and metabolic disorders (1). The branched-chain α -keto acid dehydrogenase complex (BCKDH) catalyzes the rate-limiting step in the BCAA degradation pathway (2,3). Branched-chain α -keto acid decarboxylase (BCKDH-E1) is one of three enzymatic components in this complex (3). The α subunit of BCKDH-E1 (BCKDH-E1 α) is critical for the regulation of BCKDH. Phosphorylation of BCKDH-E1 α was shown to play a key role in regulating the enzymatic activity of this complex (3-5).Phosphorylation of BCKDH-E1 α at Ser293 inactivates BCKDH (3,4). A significant elevation in plasma BCAA levels was reported to correlate with increased phosphorylation of BCKDH-E1 α at Ser293 and suppressed BCKDH activity in the liver of diabetic mice (5).**Background References**

- Li, T. et al. (2017) *Cell Metab* 25, 374-85.
- Shin, A.C. et al. (2014) *Cell Metab* 20, 898-909.
- Lu, G. et al. (2009) *J Clin Invest* 119, 1678-87.
- Harris, R.A. et al. (1997) *Adv Enzyme Regul* 37, 271-93.
- Lian, K. et al. (2015) *Diabetes* 64, 49-59.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween $\text{\textcircled{R}}$ 20 at 4°C with gentle shaking, overnight.**Applications Key****W:** Western Blotting **IP:** Immunoprecipitation**Cross-Reactivity Key****H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey**Trademarks and Patents**

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