

**BCKDH-E1α (E4T3D) Rabbit mAb**

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<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 49	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P12694	<b>Entrez-Gene Id:</b> 593
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**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 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

BCKDH-E1α (E4T3D) Rabbit mAb recognizes endogenous levels of total BCKDH-E1α protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human BCKDH-E1α 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-E1α) is critical for the regulation of BCKDH. Phosphorylation of BCKDH-E1α was shown to play a key role in regulating the enzymatic activity of this complex (3-5).

**Background References**

1. Li, T. et al. (2017) *Cell Metab* 25, 374-85.
2. Shin, A.C. et al. (2014) *Cell Metab* 20, 898-909.
3. Lu, G. et al. (2009) *J Clin Invest* 119, 1678-87.
4. Harris, R.A. et al. (1997) *Adv Enzyme Regul* 37, 271-93.
5. 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat

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