## **Recombinant Rat AMPK alpha2 Protein (His Tag)**

Catalog Number:PDER100002



Note: Centrifuge before opening to ensure complete recovery of vial contents.

## **Description**

Synonyms 5'-AMP-activated protein kinase catalytic subunit alpha-2;AAPK2;ACACA

kinase;Acetyl-CoA carboxylase kinase;AMPK alpha 2 chain;AMPK subunit alpha-2;AMPK2;AMPKa2;AMPKalpha2;HMGCR kinase;Hydroxymethylglutaryl-CoA reductase kinase;PRKAA;PRKAA2;Protein kinase AMP activated alpha 2 catalytic subunit;Protein kinase AMP activated catalytic subunit alpha 2

Species Rat
Expression Host E.coli

SequenceTyr16-Val195AccessionQ09137-1Calculated Molecular Weight20.0 kDaObserved molecular weight22.3 kDaTagN-His

### **Properties**

**Purity** > 85 % as determined by reducing SDS-PAGE.

**Endotoxin** Please contact us for more information.

**Storage** Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to

-80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots

of reconstituted samples are stable at < -20°C for 3 months.

**Shipping** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation** Lyophilized from sterile PBS, pH 7.4., 5% trehalose, 5% mannitol, 0.01% tween-80.

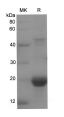
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

protectants before lyophilization.

Please refer to the specific buffer information in the print

**Reconstitution** Please refer to the printed manual for detailed information.

#### Data



> 85 % as determined by reducing SDS-PAGE.

## **Background**

The protein encoded by this gene is a catalytic subunit of the AMP-activated protein kinase (AMPK). AMPK is a heterotrimer consisting of an alpha catalytic subunit, and non-catalytic beta and gamma subunits. AMPK is an important energy-sensing enzyme that monitors cellular energy status. In response to cellular metabolic stresses, AMPK is activated, and thus phosphorylates and inactivates acetyl-CoA carboxylase (ACC) and beta-hydroxy beta-methylglutaryl-CoA

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reductase (HMGCR), key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. Studies of the mouse counterpart suggest that this catalytic subunit may control whole-body insulin sensitivity and is necessary for maintaining myocardial energy homeostasis during ischemia.

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