

## Recombinant Human AMPK (combination of A2/B1/G1 subunits), His-tagged

**Cat. No.** PRKAA2-105H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant full-length human AMPK (combination of A2/B1/G1 subunits) was expressed by baculovirus in Sf9 insect cells using a C-terminal His tag.                                                                                                                                                                                                                                                                                      |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>           | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>      | AMPK (A2/B1/G1) plays a key role in insulin signaling pathway and is a major therapeutic target for the treatment of diabetes. AMPK is viewed as a fuel sensor for glucose and lipid metabolism by modulating the activity of the autonomous nervous system in vivo. Short-term overexpression of a constitutively active form of AMPK in the liver leads to mild hypoglycemia and fatty liver due to increased fatty acid utilization. |
| <b>Form</b>             | Recombinant protein stored in 50mM sodium phosphate, pH 7.0, 300mM NaCl, 150mM imidazole, 0.1mM PMSF, 0.25mM DTT, 25% glycerol.                                                                                                                                                                                                                                                                                                         |
| <b>Molecular Mass</b>   | ~69 kDa (A2), ~38kDa (B1), and ~40kDa (G1)                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Purity</b>           | >90% by densitometry                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Applications</b>     | Kinase Assay                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Storage</b>          | Store product at –70 centigrade. For optimal storage, aliquot target into smaller                                                                                                                                                                                                                                                                                                                                                       |

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quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

**Concentration** 0.1 µg/µl

## GENE INFORMATION

**Gene Name** PRKAA2 protein kinase, AMP-activated, alpha 2 catalytic subunit [ Homo sapiens ]

**Official Symbol** PRKAA2

**Synonyms** PRKAA2; protein kinase, AMP-activated, alpha 2 catalytic subunit; PRKAA; 5-AMP-activated protein kinase catalytic subunit alpha-2; AMPK; AMPKa2; AMPK-alpha-2 chain; AMPK subunit alpha-2; 5-AMP-activated protein kinase, catalytic alpha-2 chain; AMPK2;

**Gene ID** 5563

**mRNA Refseq** NM\_006252

**Protein Refseq** NP\_006243

**MIM** 600497

**UniProt ID** P54646

**Chromosome Location** 1p31

**Pathway** AMPK inhibits chREBP transcriptional activation activity, organism-specific biosystem; AMPK signaling, organism-specific biosystem; Adipocytokine signaling pathway,

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organism-specific biosystem; Adipocytokine signaling pathway, conserved biosystem; Energy Metabolism, organism-specific biosystem; Energy dependent regulation of mTOR by LKB1-AMPK, organism-specific biosystem; Fatty acid, triacylglycerol, and ketone body metabolism, organism-specific biosystem;

**Function**

AMP-activated protein kinase activity; AMP-activated protein kinase activity; ATP binding; chromatin binding; histone serine kinase activity; metal ion binding; nucleotide binding; protein binding; protein binding, bridging; protein kinase activity; protein serine/threonine kinase activity;

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