

Active Recombinant Human PRKAA1 /AMPK (A1/B1/G1) Protein, His-tagged

Cat. No. PRKAA1-007H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active recombinant human C-terminal His-tagged AMPK complex (α 1: 1-559; β 1: 1-270; γ 1: 1-331) was expressed in insect cells.
Species	Human
Source	Insect Cells
ProteinLength	α 1: 1-559; β 1: 1-270; γ 1: 1-331
Description	The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5'-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. Alternatively spliced transcript variants encoding distinct isoforms have been observed.
Bio-activity	Assay performed in Tris-buffered solution containing Mg^{2+} with 1 mM DTT using AMARA peptide as a substrate (0.1 mg/mL), 20 μ M ATP and 100 μ M AMP. Reaction was done at 30 centigrade for 45 min. Amount of ATP transferred was calculated using via luminescent assay.

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Molecular Mass	~146 kDa (α 1: 65 kDa; β 1: 38 kDa; γ 1: 31 kDa)
Purity	≥90% as determined by SDS-PAGE
Stability	≥ 2 years
Storage	At -80 centigrade.
Storage Buffer	50 mM sodium phosphate, pH 7.0, with 300 mM sodium chloride, 150 mM imidazole, 0.25 mM DTT, and 25% glycerol
GENE INFORMATION	
Gene Name	PRKAA1 protein kinase AMP-activated catalytic subunit alpha 1 [Homo sapiens (human)]
Official Symbol	PRKAA1
Synonyms	PRKAA1; protein kinase AMP-activated catalytic subunit alpha 1; AMPK; AMPKa1; AMPK alpha 1; 5'-AMP-activated protein kinase catalytic subunit alpha-1; 5'-AMP-activated protein kinase, catalytic alpha-1 chain; ACACA kinase; AMP -activate kinase alpha 1 subunit; AMP-activated protein kinase, catalytic, alpha-1; AMPK subunit alpha-1; AMPK, alpha, 1; HMGCR kinase; acetyl-CoA carboxylase kinase; hydroxymethylglutaryl-CoA reductase kinase; protein kinase, AMP-activated, alpha 1 catalytic subunit; tau-protein kinase PRKAA1; EC 2.7.11.1; EC 2.7.11.26; EC 2.7.11.27; EC 2.7.11.31
Gene ID	5562
mRNA Refseq	NM_206907

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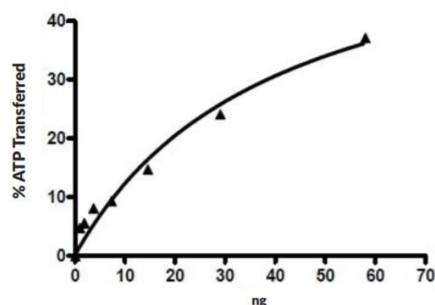
 45-1 Ramsey Road, Shirley, NY 11967, USA

Protein Refseq NP_996790

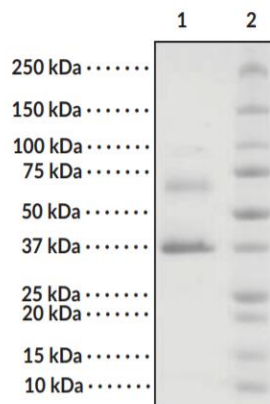
MIM 602739

UniProt ID Q13131

Specific Activity



**SDS-PAGE analysis
of AMPK Complex**



Lane 1: AMPK Complex

Lane 2: MW Markers

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