Active Recombinant Human AMPK (A1/B2/G2), GST-His-tagged

Cat. No. PRKAA1-76H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human AMPK (combination of A1/B2/G2 subunits) was expressed by baculovirus in Sf9 insect cells using the N-terminal GST and C-terminal His tags.
Species	Human
Source	Sf9 Cells
Description	AMP-activated protein kinase (AMPK) exhibits a key role as a master regulator of cellular energy homeostasis. AMPK exists as a heterotrimeric complex composed of a catalytic α subunit and regulatory beta and gamma subunits. Binding of AMP to the gamma subunit allosterically activates the complex. AMPK is activated in response to stresses that deplete cellular ATP (low glucose, hypoxia and ischemia) and via signaling pathways in response to adiponectin, leptin and CAMKKbeta.
Form	50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.
Bio-activity	The specific activity was determined to be 900 nmol/min/mg
Molecular Mass	~92 kDa (A1), ~62 kDa (B2), and ~105 kDa (G2)
Purity	>80% by densitometry.

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Applications	Kinase Assay, Western Blot
Storage	Store product at –70oC. For optimal storage, aliquot target into smaller 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	PRKAA1 protein kinase, AMP-activated, alpha 1 catalytic subunit [Homo sapiens]
Official Symbol	PRKAA1
Synonyms	PRKAA1; protein kinase, AMP-activated, alpha 1 catalytic subunit; 5-AMP-activated protein kinase catalytic subunit alpha-1; AMPK; alpha; 1; AMPKa1; AMPK alpha 1; AMPK subunit alpha-1; tau-protein kinase PRKAA1; AMP -activate kinase alpha 1 subunit; AMP-activated protein kinase, catalytic, alpha-1; 5-AMP-activated protein kinase, catalytic alpha-1 chain; MGC33776; MGC57364;
Gene ID	5562
mRNA Refseq	NM_006251
Protein Refseq	NP_006242
MIM	602739
UniProt ID	Q13131
Chromosome	5p12

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Location	
Pathway	AMPK signaling, organism-specific biosystem; Adipocytokine signaling pathway, organism-specific biosystem; Adipocytokine signaling pathway, conserved biosystem; Energy Metabolism, organism-specific biosystem; Energy dependent regulation of mTOR by LKB1-AMPK, organism-specific biosystem; Hypertrophic cardiomyopathy (HCM), organism-specific biosystem; Hypertrophic cardiomyopathy (HCM), conserved biosystem;
Function	AMP-activated protein kinase activity; AMP-activated protein kinase activity; ATP binding; cAMP-dependent protein kinase activity; chromatin binding; histone serine kinase activity; metal ion binding; nucleotide binding; protein binding; protein kinase activity; protein serine/threonine kinase activity; tau-protein kinase activity;

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