

Recombinant Human AMPK (A1/B1/G3), His-tagged, Active

Cat. No. AMPK(A1/B1/G3)-243H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human AMPK (combination of A1/B1/G3 subunits) was expressed by baculovirus in <i>Sf9 insect cells</i> using a C-terminal His tags. MW = 68kDa (A1), 38kDa (B1), 51kDa (G3).
Species	Human
Source	Sf9 Cells
Description	AMPK (A1/B1/G3) is a member of the AMPK family which are heterotrimeric proteins consisting of an alpha catalytic subunit, and non-catalytic beta and gamma subunits. AMPKs are an important energy-sensing enzyme group in the cells that monitor energy status particularly in response to stress. AMPKs regulate fatty acid and cholesterol synthesis by regulating the key rate-limiting enzymes acetyl-CoA carboxylase and hydroxy beta-methylglutaryl-CoA reductase. The γ subunit is dominantly expressed in skeletal muscle where it may play a key role in the regulation of energy metabolism.
Sequence	Full-length.
Applications	Kinase Assay, Western Blot.
Storage And Stability	Store product at -70°C . 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.

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GENE INFORMATION

Gene Name	PRKAA1 protein kinase, AMP-activated, alpha 1 catalytic subunit [Homo sapiens],PRKAB1 protein kinase, AMP-activated, beta 1 non-catalytic subunit [Homo sapiens],PRKAG3 protein kinase, AMP-activated, gamma 3 non-catalytic subunit [Homo sapiens]
Synonyms	protein kinase, AMP-activated, alpha 1 catalytic subunit; AMPK; AMPKa1; MGC33776; MGC57364; PRKAA1; AMPK alpha 1; AMP -activate kinase alpha 1 subunit; AMP-activated protein kinase, catalytic, alpha-1; 5"-AMP-activated protein kinase, catalytic alpha-1 chain; AMPK1EC; 2.7.11.1; AMPK alpha-1 chain, protein kinase, AMP-activated, beta 1 non-catalytic subunit; AMPK; HAMPKb; MGC17785; PRKAB1; AMPK beta 1; AMPK beta -1 chain; AMP-activated protein kinase beta subunit; 5"-AMP-activated protein kinase beta-1 subunit; protein kinase, AMP-activated, noncatalytic, beta-1; AMPKb; protein kinase, AMP-activated, beta 1 non-catalytic subunit, protein kinase, AMP-activated, gamma 3 non-catalytic subunit; AMPKG3; PRKAG3; AMP-activated protein kinase, non-catalytic gamma-3 subunit; AMPK gamma-3 chain; 5"-AMP-activated protein kinase, gamma-3 subunit; OTTHUMP00000164095; AMPK gamma3
Gene ID	5562,5564,53632
mRNA Refseq	NM_006251,NM_006253,NM_017431
Protein Refseq	NP_006242,NP_006244,NP_059127
MIM	602739,602740,604976
UniProt ID	Q13131, Q9Y478, Q9UGI9
Chromosome Location	5p12, 12q24.1, 2q35

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Pathway

Adipocytokine signaling pathway; Hypertrophic cardiomyopathy (HCM); Insulin signaling pathway; Regulation of autophagy; mTOR signaling pathway, Adipocytokine signaling pathway; Hypertrophic cardiomyopathy (HCM); Insulin signaling pathway, Adipocytokine signaling pathway; Hypertrophic cardiomyopathy (HCM); Insulin signaling pathway

Function

ATP binding; cAMP-dependent protein kinase activity; magnesium ion binding; nucleotide binding; protein binding; protein serine/threonine kinase activity; transferase activity, protein binding; protein kinase binding, AMP-activated protein kinase activity; protein kinase binding

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