Active Recombinant Human PRKAA2/PRKAB2/PRKAG1, His-tagged

Cat. No. PRKAA2-145H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human PRKAA2 (amino acid residues 2-552), with N-terminal 6His, PRKAB2 (amino acid residues 1-272), PRKAG1 (amino acid residues 1-331) was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	2-552;1-272;1-331 a.a.
Description	Cloning of human 5"-AMP-activated protein kinase subunits alpha, beta and gamma (AMPKαβγ) was first described by Stapleton et al. (1996; 1997). AMPK is a highly conserved heterotrimeric enzyme consisting of three subunits, α, β, and γ, with multiple genes encoding distinct subunit isoforms (ie, α1, α2, β1, β2, γ1, γ2, and γ3) (Zungu et al., 2011).
Form	50 mM Tris/HCl pH7.5, 0.1 mM EGTA, 150 mM NaCl, 0.1% ?-Mercaptoethanol, 270 mM sucrose, 0.03% Brij-35, 1 mM Benzamidine, 0.2 mM PMSF.
Bio-activity	4435 Units/mg (1198 Units/ml) Substrate: AMARA peptide (AMARAASAAALARRR)
Molecular Mass	AMPKA2 ~63.2 kDa; AMPKB2 ~30.3 kDa; AMPKG1 ~37.6 kDa
Unit Definition	1 Unit = 1 nmole of phosphate incorporated into the substrate in 1 minute.

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Storage	12 months at -70°C. Avoid multiple freeze/thaw cycles.
Concentration	0.27 mg/ml

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, organism-specific biosystem; Adipocytokine signaling pathway, conserved biosystem;

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	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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