

Recombinant Mouse Prkag1 Protein, Myc/DDK-tagged

Cat. No. Prkag1-5113M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length protein kinase, AMP-activated, gamma 1 non-catalytic subunit (Prkag1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	AMP/ATP-binding subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation. AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin. Gamma non-catalytic subunit mediates binding to AMP, ADP and ATP, leading to activate or inhibit AMPK: AMP-binding results in allosteric activation of alpha catalytic subunit (PRKAA1 or PRKAA2) both by inducing phosphorylation and preventing dephosphorylation of catalytic subunits. ADP also stimulates phosphorylation, without stimulating already phosphorylated catalytic subunit. ATP promotes dephosphorylation of catalytic subunit, rendering the AMPK enzyme inactive.
Molecular Mass	38 kDa

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Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Prkag1 protein kinase, AMP-activated, gamma 1 non-catalytic subunit [Mus musculus (house mouse)]
Official Symbol	Prkag1
Synonyms	PRKAG1; protein kinase, AMP-activated, gamma 1 non-catalytic subunit; 5-AMP-activated protein kinase subunit gamma-1; AMPKg; AMPK gamma1; AMPK subunit gamma-1; Prkaac; AA571379; BB036179
Gene ID	19082
mRNA Refseq	NM_016781
Protein Refseq	NP_058061
UniProt ID	O54950

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