Product Datasheet

PRKAG1/2/3 Antibody

Catalog No: #33818

Package Size: #33818-1 50ul #33818-2 100ul

Orders: order@signalwayantibody.com
Support: tech@signalwayantibody.com

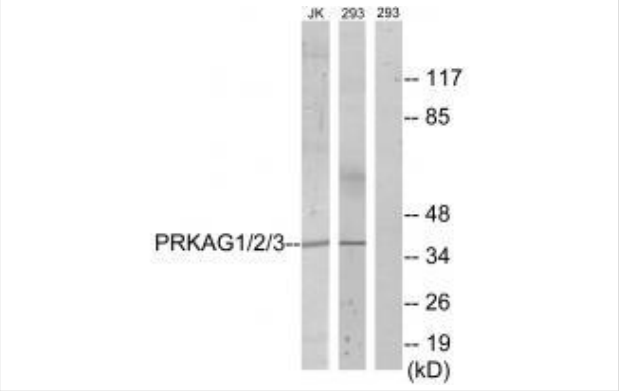
Description

Product Name	PRKAG1/2/3 Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Applications	WB
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous levels of total PRKAG1/2/3 protein.
Immunogen Type	Peptide
Immunogen Description	Synthesized peptide derived from internal of human PRKAG1/2/3.
Target Name	PRKAG1/2/3
Other Names	5'-AMP-activated protein kinase subunit gamma-1; AMPK gamma-1 chain; AMPKg; PRKAG1;
Accession No.	Swiss-Prot: P54619NCBI Gene ID: 5571/51422/53632/
Uniprot	P54619
GeneID	5571;
SDS-PAGE MW	38kd
Concentration	1.0mg/ml
Formulation	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C

Application Details

Western blotting: 1:500~1:3000

Images



Western blot analysis of extracts from Jurkat cells and 293 cells, using PRKAG1/2/3 antibody #33818.

Background

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.

Gao G., J. Biol. Chem. 271:8675-8681(1996).
The MGC Project Team, Genome Res. 14:2121-2127(2004).
Baba M., Proc. Natl. Acad. Sci. U.S.A. 103:15552-15557(2006).

Note: This product is for in vitro research use only