

ARG54128 anti-AMPK beta 1 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes PRKAB1
Tested Reactivity	Hu, Ms, Rat, Mk
Tested Application	ICC/IF, IHC-P, IP, WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Target Name	AMPK beta 1
Species	Human
Immunogen	Purified recombinant human AMPK beta 1 protein fragments expressed in E.coli.
Conjugation	Un-conjugated
Alternate Names	AMPKb; AMPK; HAMPKb; AMPK subunit beta-1; 5'-AMP-activated protein kinase subunit beta-1

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:100
	IHC-P	1:200
	IP	Assay-dependent
	WB	1:1000
Application Note	IHC-P: Antigen Retrieval: Boil tissue section in Citrate buffer (pH 6.0). * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

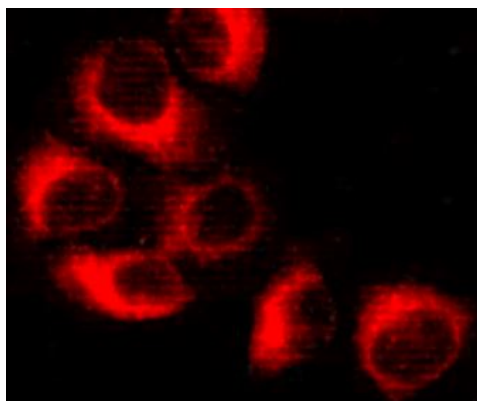
Properties

Form	Liquid
Purification	Affinity purified
Buffer	PBS (pH 7.4), 0.02% Sodium azide and 50% Glycerol
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Bioinformation

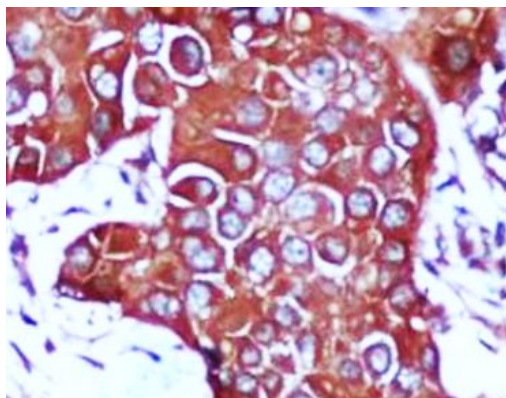
Gene Symbol	PRKAB1
Gene Full Name	protein kinase, AMP-activated, beta 1 non-catalytic subunit
Background	Non-catalytic subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular 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. Beta non-catalytic subunit acts as a scaffold on which the AMPK complex assembles, via its C-terminus that bridges alpha (PRKAA1 or PRKAA2) and gamma subunits (PRKAG1, PRKAG2 or PRKAG3).
Function	Non-catalytic 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. Beta non-catalytic subunit acts as a scaffold on which the AMPK complex assembles, via its C-terminus that bridges alpha (PRKAA1 or PRKAA2) and gamma subunits (PRKAG1, PRKAG2 or PRKAG3). [UniProt]
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Metabolism antibody; Signaling Transduction antibody
Calculated Mw	30 kDa
PTM	Phosphorylated when associated with the catalytic subunit (PRKAA1 or PRKAA2). Phosphorylated by ULK1; leading to negatively regulate AMPK activity and suggesting the existence of a regulatory feedback loop between ULK1 and AMPK.

Images



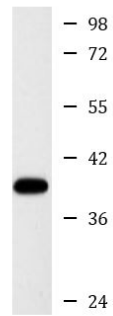
ARG54128 anti-AMPK beta 1 antibody ICC/IF image

Immunofluorescence: HeLa cells fixed with 1% Paraformaldehyde and stained with ARG54128 anti-AMPK beta 1 antibody at 1:100 dilution.



ARG54128 anti-AMPK beta 1 antibody IHC-P image

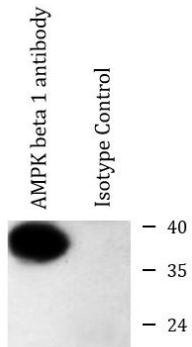
Immunohistochemistry: Paraffin-embedded breast cancer tissue stained with ARG54128 anti-AMPK beta 1 antibody at 1:200 dilution. Antigen Retrieval: Boil tissue section in Citrate buffer (pH 6.0).



3T3

ARG54128 anti-AMPK beta 1 antibody WB image

Western blot: 3T3 cell lysate stained with ARG54128 anti-AMPK beta 1 antibody at 1:1000 dilution.



ARG54128 anti-AMPK beta 1 antibody IP image

Immunoprecipitation: HeLa cell lysates were immunoprecipitated and stained with ARG54128 anti-AMPK beta 1 antibody.