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AMPK beta 1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52790

Product Information

Application	WB, ICC, IP, IHC
Primary Accession	Q9Y478
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	30382

Additional Information

Gene ID	5564
Other Names	1300015D22Rik;5 AMP activated protein kinase subunit beta 1;5''-AMP-activated protein kinase subunit beta-1;AAKB1_HUMAN;AMP-ACTIVATED PROTEIN KINASE, NONCATALYTIC, BETA-1; AMP-activated, noncatalytic, beta-1;AMPK;AMPK beta 1 chain;AMPK subunit beta-1;AMPK-BETA-1;AMPKb;AU021155;E430008F22;HAMPKb;MGC17785;PRKAB1.
Dilution	WB~~1:1000 ICC~~1:100 IP~~1:500 IHC~~1:100
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	PRKAB1
Synonyms	AMPK
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).

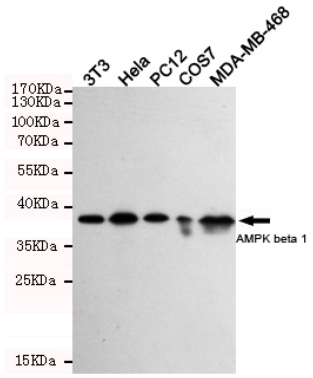
Background

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).

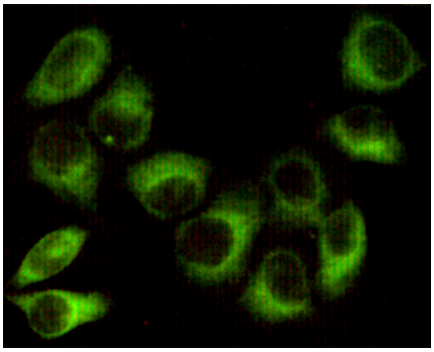
References

Carling D.,et al.Submitted (FEB-1998) to the EMBL/GenBank/DDBJ databases.
Stapleton D.,et al.FEBS Lett. 409:452-456(1997).
Yamagata K.,et al.Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
Wang X.,et al.Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
Scherer S.E.,et al.Nature 440:346-351(2006).

Images

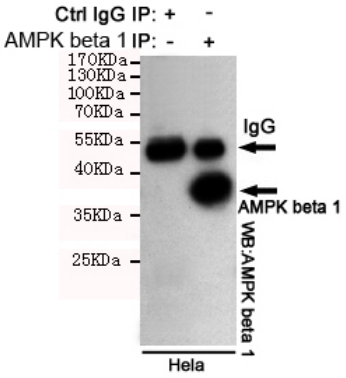


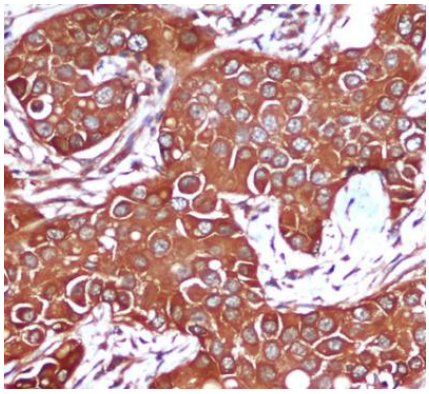
Western blot detection of AMPK beta 1 in 3T3,Hela,PC-12,COS7 and MDA-MB-468 cell lysates using AMPK beta 1 mouse mAb (1:1000 diluted).Predicted band size:38KDa.Observed band size:38KDa.Exposure time:5min.



Immunocytochemistry staining of HeLa cells fixed with 1% Paraformaldehyde and using AMPK beta 1 mouse mAb (dilution 1:100).

Immunoprecipitation analysis of Hela cell lysates using AMPK beta 1 mouse mAb.





Immunohistochemical analysis of paraffin-embedded Breast cancer using AMPK beta 1 mouse mAb (1/200 dilution).Antigen retrieval was performed by pressure cooking in citrate buffer (pH 6.0).