Data Sheet (Cat.No.TMAC-03191)

Anti-Phospho-PRKAA2 (Ser345) Antibody (4R913)

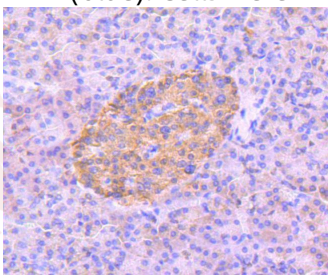
Product Details

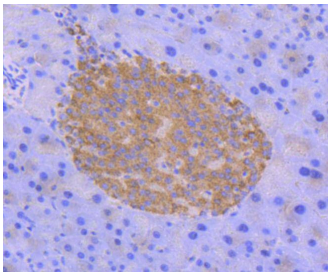
Ig Type:	IgG
Reactivity:	Human,Mouse,Rat
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 62 kDa.
Clone:	4R913
Purification:	ProA affinity purified

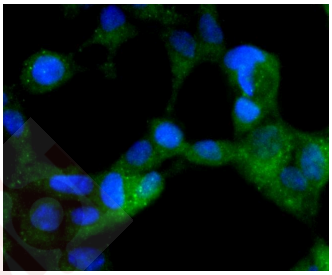
Applications

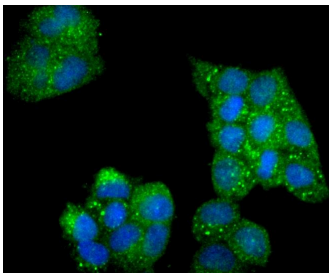
Verified Activity:

1. Immunohistochemical analysis of paraffin-embedded human pancreas tissue using anti-Phospho-AMPK alpha 2 (S345) antibody. Counter stained with hematoxylin.
2. Immunohistochemical analysis of paraffin-embedded mouse pancreas tissue using anti-Phospho-AMPK alpha 2 (S345) antibody. Counter stained with hematoxylin.
3. ICC staining Phospho-AMPK alpha 2 (S345) in 293 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.
4. ICC staining Phospho-AMPK alpha 2 (S345) in Hela cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.









Application:	ICC/IF,IHC,WB
Recommended	WB: 1:500-1000; IHC: 1:50-100; ICC/IF: 1:50-200

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	A synthesized phosphopeptide: human AMPK alpha 2 around the phosphorylation site of Ser345
Antigen Species:	Human
Uniprot ID:	P54646
Synonyms:	5'-AMP-activated protein kinase catalytic subunit alpha-2;AMPK alpha 2 chain;AMPK alpha 2 (p-Ser345);AMPK2;AAPK1;AMPK alpha 2 (p-S345);AMPK subunit alpha-2;ACACA kinase;AMPK a2;p-AMPK alpha 2 (Ser345);PRKAA;HMGCR kinase;PRKAA2;Protein kinase AMP activated alpha 2 catalytic subunit;Hydroxymethylglutaryl-CoA reductase kinase;Acetyl-CoA carboxylase kinase;Protein kinase AMP activated catalytic subunit alpha 2;AMPKa2;AMPK 2;p-AMPK alpha 2 (S345);AAPK2;AMPK-a2AMPKalpha2

Research Background

Five-prime-AMP-activated protein kinase, known as AMPK, is a heterotrimeric complex that comprises of a catalytic α subunit, and regulatory β and γ. AMPK protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. AMPK is activated by high AMP and low ATP via a mechanism involving allosteric regulation, promotion of phosphorylation by an upstream protein kinase known as AMPK kinase (AMPKK), and inhibition of dephosphorylation. Activated AMPK can phosphorylate and regulate in vivo hydroxymethylglutaryl-CoA reductase and acetyl-CoA carboxylase, which are key regulatory enzymes of sterol synthesis and fatty acid synthesis, respectively. The human AMPKα1 gene maps to chromosome 5p12 and encodes a 548 amino acid protein. The major regulatory site phosphorylated by AMPKK on AMPKα has been identified as Thr 172 within the activation loop between the DFG and APE motifs of the alpha-subunits.

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