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PRKAA1 Antibody (monoclonal) (M03)

Mouse monoclonal antibody raised against a partial recombinant PRKAA1.
Catalog # AT3426a

Product Information

Application	WB, IHC, IF
Primary Accession	Q13131
Other Accession	NM_006251
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG2a Kappa
Clone Names	4D8
Calculated MW	64009

Additional Information

Gene ID	5562
Other Names	5'-AMP-activated protein kinase catalytic subunit alpha-1, AMPK subunit alpha-1, Acetyl-CoA carboxylase kinase, ACACA kinase, Hydroxymethylglutaryl-CoA reductase kinase, HMGCR kinase, Tau-protein kinase PRKAA1, PRKAA1, AMPK1
Target/Specificity	PRKAA1 (AAH12622, 451 a.a. ~ 550 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IHC~~1:100~500 IF~~1:50~200
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	PRKAA1 Antibody (monoclonal) (M03) is for research use only and not for use in diagnostic or therapeutic procedures.

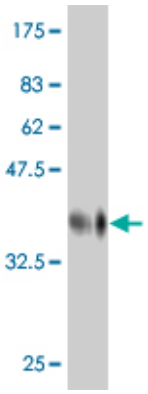
Background

The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5'-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. Alternatively spliced transcript variants encoding distinct isoforms have been observed.

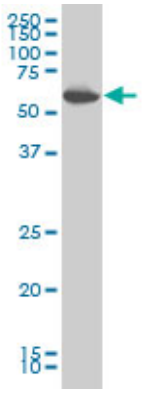
References

Association Study of Energy Homeostasis Genes and Antipsychotic-Induced Weight Gain in Patients with Schizophrenia. Jassim G, et al. Pharmacopsychiatry, 2010 Sep 6. PMID 20821366.COMMON VARIANTS IN 40 GENES ASSESSED FOR DIABETES INCIDENCE AND RESPONSE TO METFORMIN AND LIFESTYLE INTERVENTIONS IN THE DIABETES PREVENTION PROGRAM. Jablonski KA, et al. Diabetes, 2010 Aug 3. PMID 20682687.Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.Genetic variation in a metabolic signaling pathway and colon and rectal cancer risk: mTOR, PTEN, STK11, RPKAA1, PRKAG2, TSC1, TSC2, PI3K and Akt1. Slattery ML, et al. Carcinogenesis, 2010 Sep. PMID 20622004.Physiogenomic analysis of statin-treated patients: domain-specific counter effects within the ACACB gene on low-density lipoprotein cholesterol? Rua?o G, et al. Pharmacogenomics, 2010 Jul. PMID 20602615.

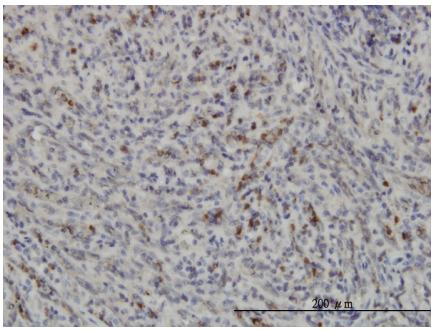
Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (36.74 KDa) .

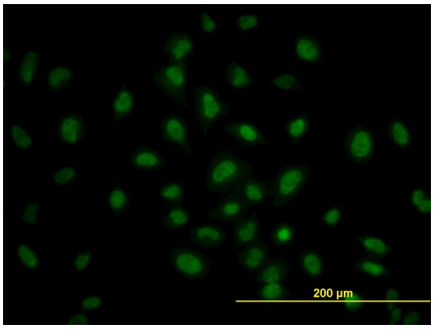


PRKAA1 monoclonal antibody (M03), clone 4D8 Western Blot analysis of PRKAA1 expression in K-562 ((Cat # AT3426a)



Immunoperoxidase of monoclonal antibody to PRKAA1 on formalin-fixed paraffin-embedded human spleen. [antibody concentration 3 ug/ml]

Immunofluorescence of monoclonal antibody to PRKAA1 on HeLa cell. [antibody concentration 10 ug/ml]



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.