

Datasheet: VMA00924

BATCH NUMBER 100005623

Description:	MOUSE ANTI PRKAB1
Specificity:	PRKAB1
Format:	Purified
Product Type:	PrecisionAb Monoclonal
Clone:	K02/3D4
Isotype:	IgG1
Quantity:	100 µl

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Western Blotting	▪			1/2000

The PrecisionAb label is reserved for antibodies that meet the defined performance criteria within Bio-Rad's ongoing antibody validation programme. Click [here](#) to learn how we validate our PrecisionAb range. Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Further optimization may be required dependent on sample type.

Target Species	Human
Species Cross Reactivity	Reacts with: Mouse, Rat N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.
Product Form	Purified IgG - Liquid
Preparation	Mouse monoclonal antibody affinity purified on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative	0.09% Sodium Azide

Stabilisers

Approx. Protein Concentrations IgG concentration 1.0 mg/ml

Immunogen *E. coli*-derived recombinant protein of amino acids 1-270 of human PRKAB1

External Database Links

UniProt:
[Q9Y478](#) [Related reagents](#)

Entrez Gene:
[5564](#) PRKAB1 [Related reagents](#)

Synonyms AMPK

Fusion Partners Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2/0 myeloma cell line

Specificity **Mouse anti PRKAB1 antibody** recognizes 5'-AMP-activated protein kinase subunit beta-1, also known as AMPKb.

AMPK is a serine/threonine protein kinase complex which acts as a sensor of adenine nucleotides, and is activated by low cellular energy. Under these conditions AMPK activates catabolic pathways that generate ATP and deactivates anabolic pathways that consume ATP, restoring energy balance ([Lin et al. 2017](#)). Conditions that deplete cellular energy levels include nutrient starvation, hypoxia, and exposure to toxins, inhibiting the mitochondrial respiratory chain and activating AMPK. Activators and inhibitors of AMPK have been suggested as important tools for controlling human diseases including metabolic syndrome and cancer ([Kim et al. 2016](#)). In mice, AMPK appears to act as a tumor suppressor and a tumor promoter in different contexts. Prior to cancer development it can act as a suppressor, but switches to being a tumor promoter once cancer has occurred, favoring survival of cancer cells ([Vara-Ciruelos et al. 2019](#)).

Western Blotting Mouse anti PRKAB1 detects a band of approximately 36 kDa in C6 cell lysates

Storage Store undiluted at -20°C, avoiding repeated freeze thaw cycles

Guarantee 12 months from date of despatch

Acknowledgements PrecisionAb is a trademark of Bio-Rad Laboratories

Health And Safety Information Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/VMA00924> Antibody (10040)

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (H/L) (STAR207...) [HRP](#)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

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