

## Datasheet: VMA00924

<b>Description:</b>	MOUSE ANTI PRKAB1
<b>Specificity:</b>	PRKAB1
<b>Format:</b>	Purified
<b>Product Type:</b>	PrecisionAb Monoclonal
<b>Clone:</b>	K02/3D4
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://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 Stabilisers

0.09% Sodium Azide

<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant protein of amino acids 1-270 of human PRKAB1
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q9Y478</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">5564</a>    PRKAB1    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	AMPK
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2/0 myeloma cell line
<b>Specificity</b>	<p><b>Mouse anti PRKAB1 antibody</b> recognizes 5'-AMP-activated protein kinase subunit beta-1, also known as AMPKb.</p> <p>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 (<a href="#">Lin et al. 2017</a>). 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 (<a href="#">Kim et al. 2016</a>). 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 (<a href="#">Vara-Ciruelos et al. 2019</a>).</p>
<b>Western Blotting</b>	Mouse anti PRKAB1 detects a band of approximately 36 kDa in C6 cell lysates
<b>Storage</b>	Store undiluted at -20°C, avoiding repeated freeze thaw cycles
<b>Guarantee</b>	12 months from date of despatch
<b>Acknowledgements</b>	PrecisionAb is a trademark of Bio-Rad Laboratories
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: Antibody (10040): <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

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

## Recommended Negative Controls

### MOUSE IgG1 NEGATIVE CONTROL (MCA928)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

**Worldwide**

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: [antibody\\_sales\\_uk@bio-rad.com](mailto:antibody_sales_uk@bio-rad.com)

**Europe**

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Fax: +49 (0) 89 8090 95 50

Email: [antibody\\_sales\\_de@bio-rad.com](mailto:antibody_sales_de@bio-rad.com)

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

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