Datasheet: HCA017

Description:	HUMAN ANTI AKT1
Specificity:	AKT1
Other names:	PROTEIN KINASE B
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	AbD03813
Isotype:	HuCAL Fab bivalent
Quantity:	0.1 mg

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
ELISA	▪			2 ug/ml
Western Blotting	▪			2 ug/ml

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species

Human

Species Cross Reactivity

Based on sequence similarity, is expected to react with:Rat, Mouse
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

A lyophilized bivalent human recombinant Fab selected from the HuCAL® GOLD phage display library. Expressed in *E. coli* and purified using NiNTA affinity chromatography. This Fab fragment is dimerized via a helix-turn-helix motif. The antibody is tagged with a myc-tag (EQKLISEEDL) and a his-tag (HHHHHH) at the C-terminus of the antibody heavy chain.

Reconstitution

Reconstitute with 0.1 ml distilled water

Preparation	Metal-chelate affinity chromatography
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	None present
Approx. Protein Concentrations	Antibody concentration 1.0 mg/ml after reconstitution
Immunogen	Human AKT1 (Val106-Ala480) fusion protein. The antigen contains the complete kinase domain (amino acids 150 to 408, molecular weight 77.8 kDa) but not the N-terminal PH domain.
External Database Links	**UniProt:** P31749 Related reagents **Entrez Gene:** 207 AKT1 Related reagents
Synonyms	PKB, RAC
RRID	AB_770063
Specificity	**Human anti AKT1 antibody, clone AbD03813** recognizes AKT1, it does not react with human AKT2 or AKT3. Two serine/threonine kinases, designated AKT1 and AKT2 exhibit sequence homology with the protein kinase A and C families and are encoded by the c-AKT proto-oncogene. AKT1 and the related AKT2 are activated by platelet-derived growth factor (PDGF). The activation is rapid and specific, and it is abrogated by mutations in the Pleckstrin homology domain (PH) of AKT1. It was shown that the activation occurs through phosphatidylinositol 3-kinase. Binding of the PH domain to the phosphatidylinositol 3-kinase alpha (PI(3)K) results in its targeting to the plasma membrane. Additionally, the activation of AKT1 and AKT2 is inhibited by the PI kinase inhibitor wortmannin. Taken together, this data strongly suggests that the protein signals downstream of the PI kinases. In the developing nervous system AKT is a critical mediator of growth factor-induced neuronal survival. Survival factors can suppress apoptosis in a transcription-independent manner by activating the serine/threonine kinase AKT1, which then phosphorylates and inactivates components of the apoptotic machinery. Phosphorylation on Thr-308, Ser-473 and Tyr-474 is required for full activity. Ser-473 is dephosphorylated by PHLPP.
Storage	Prior to reconstitution store at +4^{o}C. After reconstitution store at -20^{o}C. Storage in frost-free freezers is not recommended. This product should be stored undiluted.
Guarantee	6 months from date of reconstitution

Acknowledgements	Sold under license of U.S. Patents 6753136, 7785859 and 8273688 and corresponding patents. This antibody was developed by Bio-Rad, Zeppelinstr. 4, 82178 Puchheim, Germany. His-tag is a registered trademark of EMD Biosciences.
Health And Safety Information	Material Safety Datasheet documentation #10162 available at: 10162: https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf
Licensed Use	For *in vitro* research purposes only, unless otherwise specified in writing by Bio-Rad.
Regulatory	For research purposes only
Technical Advice	Recommended protocols and further information about HuCAL recombinant antibody technology can be found in the HuCAL Antibodies Technical Manual

Related Products

Recommended Secondary Antibodies

Mouse Anti Synthetic Peptide HISTIDINE TAG (MCA5995...)	HRP
Goat Anti Human IgG F(ab')2 (0500-0099...)	HRP
Mouse Anti Human C-MYC (MCA2200...)	Purified

North & South America
Tel: +1 800 265 7376
Fax: +1 919 878 3751
Email: 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

Europe
Tel: +49 (0) 89 8090 95 21
Fax: +49 (0) 89 8090 95 50
Email: antibody_sales_de@bio-rad.com

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