

Technical Data Sheet

Purified Mouse Anti-Akt

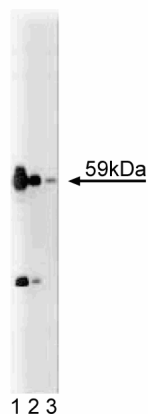
Product Information

Material Number:	610877
Alternate Name:	PKB α ; RAC-PK
Size:	150 μ g
Concentration:	250 μ g/ml
Clone:	2/PKB α /Akt
Immunogen:	Human PKB α /Akt1 aa. 1-480
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human Tested in Development: Dog, Mouse, Rat, Drosophila
Target MW:	59 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09\%$ sodium azide.

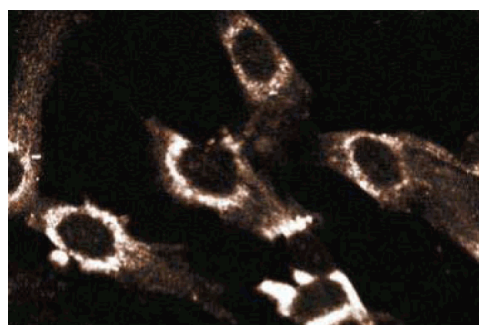
Description

Protein Kinase B (PKB), also known as Rac (**R**elated to the **A** and **C** kinases) Protein Kinase, shows 73% and 68% to Protein Kinase C (PKC) and Protein Kinase A (PKA), respectively. It was also identified as the product of the v-akt oncogene from T-cell lymphomas. Akt/PKB mRNA has been reported to be expressed in a wide variety of cell lines and has been detected in porcine brain, heart, liver, kidney, muscle, and ovary. Rac phosphorylates a number of physiological substrates including MBP, glycogen synthetase, PKA RII subunit, and histone H1. Akt/PKB is activated in response to growth factors through the activation of PI3-kinase and Ras. Activation of PI3-Kinase generates phosphatidylinositol 3,4-bisphosphate which may induce the membrane translocation of Akt/PKB coincident with its phosphorylation and activation. Cellular stress leading to the activation of the p38 MAP kinase also induces Akt/PKB activation, indicating a multiplicity of signaling pathways that activate Akt/PKB. Upon activation, Akt/PKB associates with some members of the PKC family of kinases, such as PKC δ and PKC ζ . Downstream of Akt/PKB, GSK3 is thus far the only identified substrate for Akt/PKB phosphorylated in vivo.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of Akt on a HCT-8 (human colorectal adenocarcinoma) cell lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the anti- Akt antibody.



Immunofluorescence staining on WI-38 cells (human lung fibroblasts; ATCC CCL-75).

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at -20° C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611474	HCT-8 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmlingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Jones PF, Jakubowicz T, Pitossi FJ, Maurer F, Hemmings BA. Molecular cloning and identification of a serine/threonine protein kinase of the second-messenger subfamily. *Proc Natl Acad Sci U S A*. 1991; 88(10):4171-4175.(Biology)

Marte BM, Downward J. PKB/Akt: connecting phosphoinositide 3-kinase to cell survival and beyond. *Trends Biochem Sci*. 1997; 22(9):355-358.(Biology)