Akt (N-terminal Region)

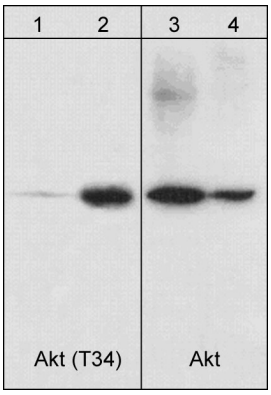
Cat. #	AM1011
Host	Mouse Monoclonal IgG1
Size	100 µl

Background:

Akt (PKB, Rac kinase) is a 60kDa ser/thr kinase critical for controlling diverse cellular functions, including glucose metabolism, gene transcription, cell proliferation, and apoptosis. Akt phosphorylates a number of substrates including MBP, glycogen synthetase, PKA RII subunit, and histone H1. Akt is activated in response to insulin and growth factors in a PI3-kinase dependent manner. Activation of PI3-Kinase generates phosphatidylinositol 3,4-bisphosphate, which induces membrane translocation of Akt coincident with its phosphorylation at Thr -308 and Ser-473. Upon activation, Akt associates with members of the PKC family of kinases, such as PKCδ and PKCζ. Ceramide-activated PKCζ leads to phosphorylation of Thr-34 within the pleckstrin homology domain of Akt. This phosphorylation inhibits PIP3 binding to Akt preventing activation of the kinase and may lead to cermide-induced cell death.

References

Jones, P.F. et al. (1991) Proc. Natl. Acad. Sci. USA 88:4171-4175.
Marte, B. & Downward. J. (1997) TIBS. 22:355-358.
Powell, D.J. et al. (2003) Mol. Cell Biol. 23:7794-7808.
Smith, M.A. et al. (2007) Am. J. Phys. Cell. Phys. 293:1947. (WB: mouse C2C12)
Moylan, J.S. et al. (2008) Am. J. Phys. Cell. Phys. 295:986. (WB: mouse C2C12)



Western blot analysis of A431 cells, serum starved overnight (lanes 1 & 3) or treated with calyculin A (100 nM) for 30 min. (lanes 2 & 4). The blot was probed with anti-Akt (Thr-34) (lanes 1 & 2) or anti-Akt1 (N-terminal region) (lanes 3 & 4).

Immunogen:

Clone M101 was generated from a recombinant protein containing amino acid residues in the N-terminal region of human Akt1. This sequence is highly conserved in human and mouse Akt, and may recognize Akt2 and Akt3.

Buffer and Storage:

Mouse monoclonal purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Do not aliquot. Stable for 1 year.

Applications:

WB	1:1000
ELISA	1:2000
ICC	1:250

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Specificity:

This antibody detects a 60 kDa* protein corresponding to the apparent molecular mass of Akt on SDS-PAGE immunoblots of A431 cell lysate. Similar results were seen in various other human, rat, and mouse lysates.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Related Products:

AP1001 Akt (Thr-34), phospho-specific Rabbit Polyclonal
AM1141 Akt (Ser-473), phospho-specific Mouse Monoclonal
AL9171 A431 Normal Lysate

FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

web: www.ecmbiosciences.com telephone: 859-879-2075
email: info@ecmbiosciences.com toll-free: 1-800-859-8202

Rev 10/21/2008