

Anti-Akt2 Antibody [2A1]

RT1027



Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IP, IF, IHC-P
Molecular Wt:	56 kDa
Clone number:	2A1

Description: The serine/threonine kinase Akt family contains several members, including Akt1 (also designated PKB or RacPK), Akt2 (also designated PKB β or RacPK- β) and Akt 3 (also designated PKB γ or thymoma viral proto-oncogene 3), which exhibit sequence homology with the protein kinase A and C families and are encoded by the c-Akt proto-oncogene. All members of the Akt family have a Pleckstrin homology domain. Akt1 and Akt2 are activated by PDGF stimulation that is dependent on PDGFR- β tyrosine residues 740 and 751, which bind the subunit of the phosphatidylinositol 3-kinase (PI 3-kinase) complex. Akt proteins become phosphorylated and activated in Insulin/IGF-I-stimulated cells by an upstream kinase, and 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.

Immunogen: peptide

Positive control: HeLa, MCF7, Langerhans, glandular, human pancreas tissue.

Subcellular location: Cytoplasm, Nucleus, Cell membrane

Database links: SwissProt: P31751 Human

Recommended Dilutions:

WB	1:100-1:1,000
IP	1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)
IF	1:50-500
IHC-P	1:50-500

Storage Buffer: 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Storage Instruction: Store at +4 $^{\circ}$ C

Purity: Protein A affinity purified.

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Images

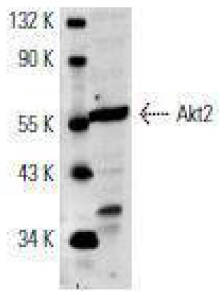


Fig1: Western blot analysis of Akt2 expression in MCF7 whole cell lysate.

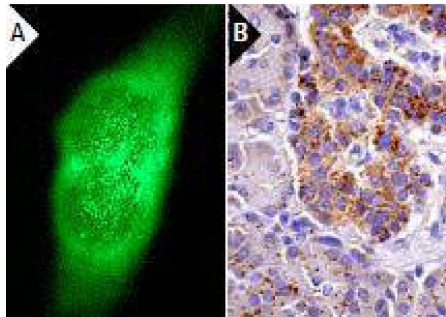


Fig2: Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing granular cytoplasmic staining of Islets of Langerhans and glandular cells (B).

Note: All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”.

Background References

1. Khan, S., et al. 2012. A novel cyano derivative of 11-keto- β -boswellic acid causes apoptotic death by disrupting PI3K/AKT/Hsp-90 cascade, mitochondrial integrity, and other cell survival signaling events in HL-60 cells. *Mol. Carcinog.* 51: 679-695.
2. Kong, J., et al. 2012. Insufficient radiofrequency ablation promotes angiogenesis of residual hepatocellular carcinoma via HIF-1 α /VEGFA. *PLoS ONE* 7: e37266
3. Imanishi, Y., et al. 2011. Angiopoietin-2, an angiogenic regulator, promotes initial growth and survival of breast cancer metastases to the lung through the integrin-linked kinase (ILK)-AKT-B cell lymphoma 2 (Bcl-2) pathway. *J. Biol. Chem.* 286: 29249-29260.