

#21054

Akt (Ab-473) Antibody

Catalog: #21054-1 50µl **Orders:** order@signalwayantibody.com
#21054-2 100µl **Support:** tech@signalwayantibody.com
Storage: Store at -20°C/1 year **Web:** www.signalwayantibody.com



Application	Species Reactivity	Source	Molecular Wt.
WB IHC	Human Mouse Rat	Rabbit Polyconal Ab	60KD

Description: Antibodies were produced by immunizing rabbits with synthetic peptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific peptide.

Specificity: The antibody detects endogenous level of total Akt protein.

Immunogen: Peptide sequence around aa. 471~475 (Q-F-S-Y-S) derived from Human Akt.

Formulation: Supplied at 1.0mg/mL in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.

Synonyms: AKT C-AKT PKB PKB-alpha RAC

Accession No.: Swiss-Prot#: P31749 NCBI Gene#: 207
NCBI Protein#: NP_001014431.1

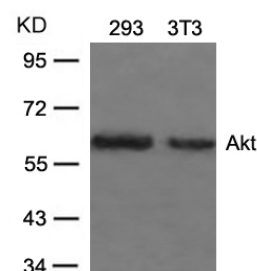
Background: General protein kinase capable of phosphorylating several known proteins. Phosphorylates TBC1D4. Signals downstream of phosphatidylinositol 3-kinase (PI3K) to mediate the effects of various growth factors such as platelet-derived growth factor (PDGF), epidermal growth factor (EGF), insulin and insulin-like growth factor I (IGF-I). Plays a role in glucose transport by mediating insulin-induced translocation of the GLUT4 glucose transporter to the cell surface. Mediates the antiapoptotic effects of IGF-I. Mediates insulin-stimulated protein synthesis by phosphorylating TSC2 at 'Ser-939' and 'Thr-1462', thereby activating mTORC1 signaling and leading to both phosphorylation of 4E-BP1 and in activation of RPS6KB1. Promotes glycogen synthesis by mediating the insulin-induced activation of glycogen synthase.

References:

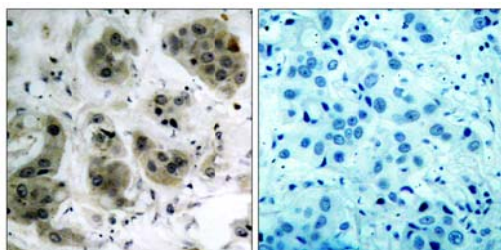
- Baudhuin LM, et al. (2004) FASEB J Feb; 18(2): 341-3.
Min YH, et al. (2004) Cancer Res; 64(15): 5225-31.
Feng J, et al. (2004) J Biol Chem; 279(34): 35510-7.
Ayala G, et al. (2004) Clin Cancer Res; 10(19): 6572-8.
Lungu AO, et al. (2004) J Biol Chem; 279(47): 48794-800.

Recommended Dilutions:

Western blotting 1:500~1:1000
Immunohistochemistry 1:50~1:100



Western blot analysis of extracts from 293 and 3T3 cells using Akt (Ab-473) Antibody #21054.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using Akt (Ab-473) Antibody #21054 (left) or the same antibody preincubated with blocking peptide (right).

Citation:

Young Yil Bahk, Ick-Hyun Cho, Tong Soo Kim, et al. A Cross-talk between oncogenic Ras and tumor suppressor PTEN through FAK Tyr861 phosphorylation in NIH/3T3 mouse embryonic fibroblasts. *Biochemical and Biophysical Research Communications*, 377, 1199–1204, (2009)

Jing Zhang, Osamu Yamada, Yoshihisa Matsushita, et al. Transactivation of human osteopontin promoter by human T-cell leukemia virus type 1-encoded Tax protein. *Leukemia Research* in press. (2009)

Nabissi Massimo, Morelli Maria Beatrice, Amantini Consuelo, et al. TRPV2 channel negatively controls glioma cell proliferation and resistance to Fas-induced apoptosis in ERK-dependent manner. *Carcinogenesis*. 0: bbg019v1-bgg019. (2010)

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Related Pathway: Akt, Insulin/Glucose, Jak/Stat, Cytoskeletal/Adhesion, Wnt/beta-catenin

Note: *For western blotting, incubate membrane with diluted antibody in 5% nonfat milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.*