Best Tools for immunology Research

Akt1 (phospho Thr450) Polyclonal Antibody

Catalog No :	YP0008
Reactivity :	Human;Mouse;Rat
Applications :	WB;IHC;IF;ELISA
Target :	Akt1
Fields :	>>EGFR tyrosine kinase inhibitor resistance;>>Endocrine resistance;>>Platinum drug resistance;>>MAPK signaling pathway;>>ErbB signaling pathway;>>Ras signaling pathway;>>Rap1 signaling pathway;>>cGMP-PKG signaling pathway;>>cAMP signaling pathway;>>Chemokine signaling pathway;>>HIF-1 signaling pathway;>>FoxO signaling pathway;>>Sphingolipid signaling pathway;>>Phospholipase D signaling pathway;>>Autophagy - animal;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>AMPK signaling pathway;>>Apoptosis;>>Longevity regulating pathway;>>Longevity regulating pathway - multiple species;>>Cellular senescence;>>Adrenergic signaling in cardiomyocytes;>>VEGF signaling pathway;>>Apelin signaling pathway;>>Osteoclast differentiation;>>Focal adhesion;>>Signaling pathways regulating pluripotency of stem cells;>>Platelet activation;>>Neutrophil extracellular trap formation;>>Toll-like receptor signaling pathway;>>C-type lectin receptor signaling pathway;>>JAK-STAT signaling pathway;>>T cell recept
Gene Name :	AKT1
Protein Name :	RAC-alpha serine/threonine-protein kinase
Human Gene Id :	207
Human Swiss Prot No :	P31749
Mouse Gene Id :	11651
Mouse Swiss Prot No :	P31750
Rat Gene Id :	24185
Rat Swiss Prot No :	P47196

Immunogen :	The antiserum was produced against synthesized peptide derived from human Akt1 around the phosphorylation site of Thr450. AA range:416-465
Specificity :	Phospho-Akt1 (T450) Polyclonal Antibody detects endogenous levels of Akt1 protein only when phosphorylated at T450.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:5000.. IF 1:50-200
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	56kD
Cell Pathway :	Regulation_Microtubule; T_Cell_Receptor; Regulates Angiogenesis; SAPK_JNK; Stem cell pathway; Insulin Receptor; Toll_Like; ErbB/HER; AMPK; MAPK_ERK_Growth;MAPK_G_Protein; B_Cell_Antigen; Adherens_Junc
Background :	The serine-threonine protein kinase encoded by the AKT1 gene is catalytically inactive in serum-starved primary and immortalized fibroblasts. AKT1 and the related AKT2 are activated by platelet-derived growth factor. The activation is rapid and specific, and it is abrogated by mutations in the pleckstrin homology domain of AKT1. It was shown that the activation occurs through phosphatidylinositol 3-kinase. 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. Mutations in this gene have been associated with the Proteus syndrome. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jul 2011]
Function :	catalytic activity:ATP + a protein = ADP + a phosphoprotein.,disease:Defects in AKT1 are associated with breast cancer (BC) [MIM:114480]. BC is an extremely common malignancy, affecting one in eight women during their lifetime.,disease:Defects in AKT1 are associated with colorectal cancer (CRC) [MIM:114500].,disease:Defects in AKT1 are associated with susceptibility to ovarian cancer [MIM:604370]; also called susceptibility to familial breast-ovarian cancer type 1 (BROVCA1).,domain:Binding of the PH domain to the phosphatidylinositol 3-kinase alpha (PI(3)K) results in its targeting to the plasma

membrane.,domain:The AGC-kinase C-terminal mediates interaction with THEM4.,enzyme regulation:Three specific sites, one in the kinase domain (Thr-308) and the two other ones in the C-terminal regulatory region (Ser-473 and Tyr-474), need to be phosphorylated for its full activation.,function:Gene

Subcellular Location : Cytoplasm . Nucleus . Cell membrane . Nucleus after activation by integrin-linked protein kinase 1 (ILK1). Nuclear translocation is enhanced by interaction with TCL1A. Phosphorylation on Tyr-176 by TNK2 results in its localization to the cell membrane where it is targeted for further phosphorylations on Thr-308 and Ser-473 leading to its activation and the activated form translocates to the nucleus. Colocalizes with WDFY2 in intracellular vesicles (PubMed:16792529). .

Expression : Expressed in prostate cancer and levels increase from the normal to the malignant state (at protein level). Expressed in all human cell types so far analyzed. The Tyr-176 phosphorylated form shows a significant increase in expression in breast cancers during the progressive stages i.e. normal to hyperplasia (ADH), ductal carcinoma in situ (DCIS), invasive ductal carcinoma (IDC) and lymph node metastatic (LNMM) stages.

Tag : orthogonal,hot

Sort : 679

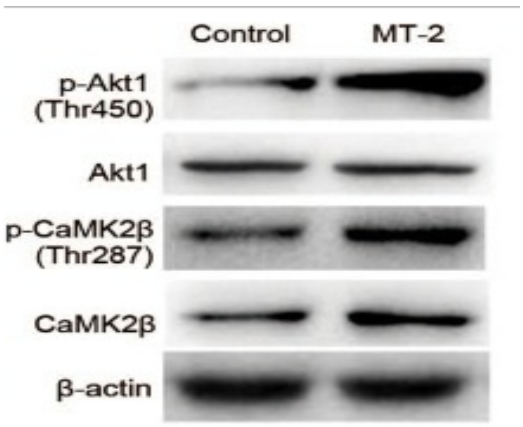
No2 : 12178S

No4 : 1

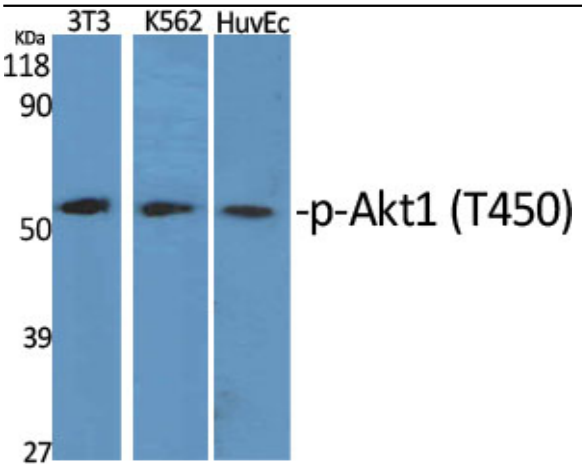
Host : Rabbit

Modifications : Phospho

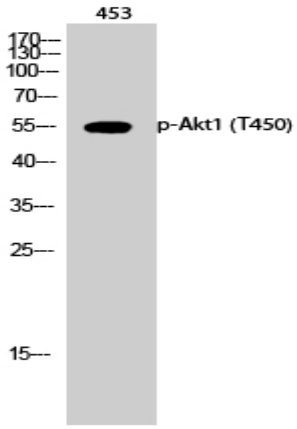
Products Images



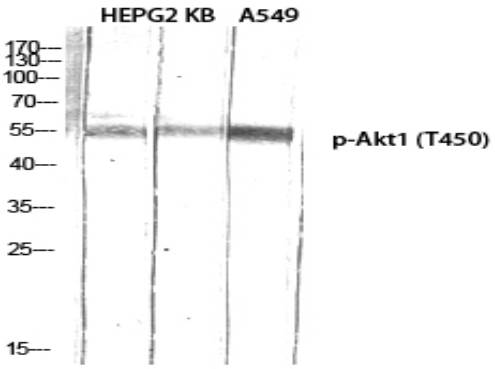
Zhou, Dong-Dong, et al. "Metallothionein-2 is associated with the amelioration of asthmatic pulmonary function by acupuncture through protein phosphorylation." Biomedicine & Pharmacotherapy 123 (2020): 109785.



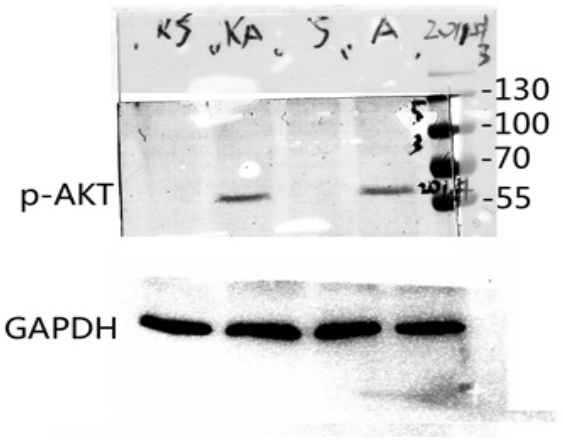
Western Blot analysis of various cells using Phospho-Akt1 (T450) Polyclonal Antibody diluted at 1:1000



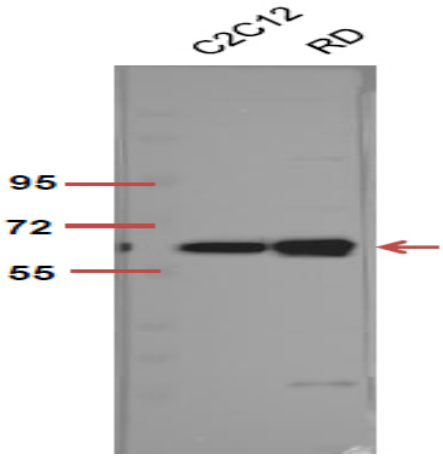
Western Blot analysis of 453 cells using Phospho-Akt1 (T450) Polyclonal Antibody diluted at 1:1000



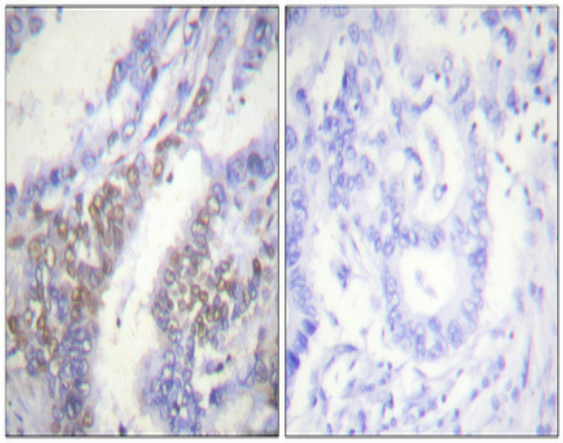
Western Blot analysis of HEPG2 KB A549 using Phospho-Akt1 (T450) Polyclonal Antibody diluted at 1:1000



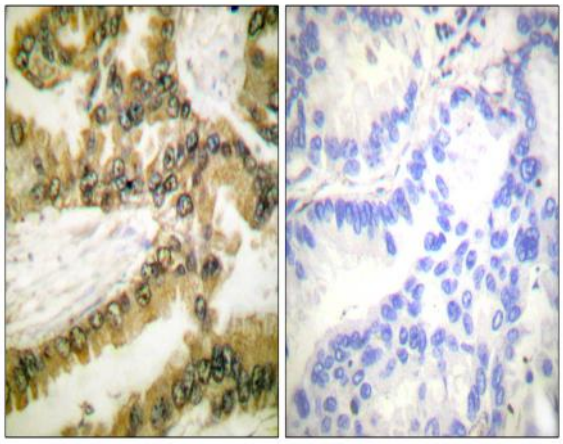
Western blot analysis of various lysis using Phospho-Akt1 (T450) Polyclonal Antibody diluted at 1:1000. Secondary antibody(catalog#:RS0002) was diluted at 1:20000



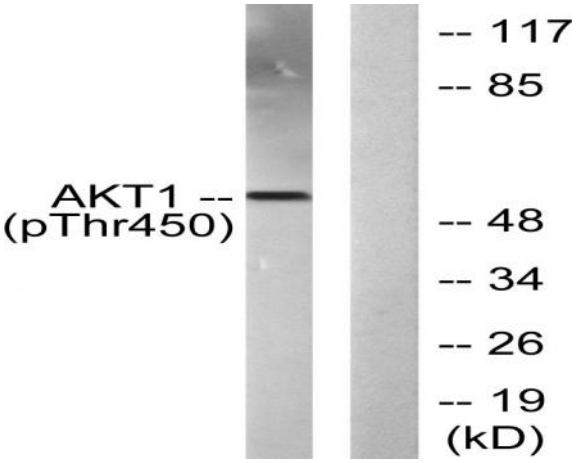
The picture was kindly provided by our customer,antibody was diluted at 1:500



Immunohistochemical analysis of paraffin-embedded Human lung cancer. Antibody was diluted at 1:100(4° overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negetive contrl (right) obtaned from antibody was pre-absorbed by immunogen peptide.



Immunohistochemistry analysis of paraffin-embedded human lung carcinoma, using Akt1 (Phospho-Thr450) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from NIH/3T3 cells treated with PDGF 50ng/ml 20', using Akt1 (Phospho-Thr450) Antibody. The lane on the right is blocked with the phospho peptide.