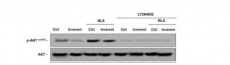
Phospho-Akt(Ser473) Ab

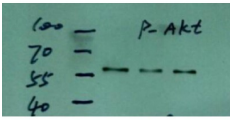
Cat.#: AF0016	Concn.: 1mg/ml	Mol.Wt.: 60kDa
Size: 100ul,200ul	Source: Rabbit	Clonality: Polyclonal

Application:	WB 1:500-1:2000 IHC 1:50-1:200 IF/ICC 1:100-1:500
Reactivity:	Human,Mouse,Rat
Purification:	The Ab is from purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Specificity:	Phospho-Akt(Ser473) Ab detects endogenous levels of Akt only when phosphorylated at Sersine 473.
Immunogen:	A synthesized peptide derived from human Akt around the phosphorylation site of Sersine 473.
Uniprot:	P31749/P31751/Q9Y243
Description:	an AGC kinase that plays a critical role in controlling the balance between survival and AP0ptosis. Phosphorylated and activated by PDK1 in the PI3 kinase pathway. Mediates survival signals downstream of PI3 kinase and several growth factor receptors by phosphorylating AP0pototic proteins. First found in a mouse transforming retrovirus. Tumorigenic in a mouse lymphoma model and activated (by phospho-Akt staining) and/or overexpressed in a number of cancers including breast, prostate, lung, pancreatic, liver, ovarian and colorectal. Inhibitor: RX-0201. Substrates include tuberin, Bad, Forkhead transcription factors, caspase-9, and glycogen synthase kinase-3.
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.
Tissue Specificity:	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.

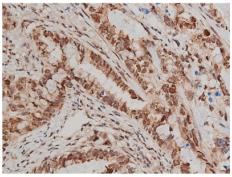
Similarity:	Binding of the PH domain to phosphatidylinositol 3,4,5-trisphosphate (PI(3,4,5)P3) following phosphatidylinositol 3-kinase alpha (PIK3CA) activity results in its targeting to the plasma membrane. The PH domain mediates interaction with TNK2 and Tyr-176 is also essential for this interaction.The AGC-kinase C-terminal mediates interaction with THEM4.Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. RAC subfamily.
Storage Condition and Buffer:	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.Store at -20 °C.Stable for 12 months from date of receipt.



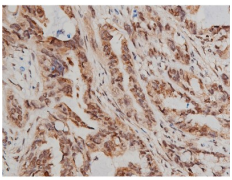
This image is a courtesy of anonymous review.



Western blot analysis of Phospho-Akt(Ser473) Ab expression in cells lysates.



AF0016 at 1/200 staining human lung cancer tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the Ab for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit Ab was used as the secondary.



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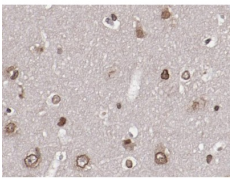

Phospho-Akt(Ser473) Ab for IHC in human brain tissue

AF0016 staining 293 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25°C. The primary Ab was diluted at 1/200 and incubated with the sample for 1 hour at 37°C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary Ab.

AF0016 staining 293 cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25°C. The primary Ab was diluted at 1/200 and incubated with the sample for 1 hour at 37°C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab(Red), diluted at 1/600, was used as secondary Ab.

IMPORTANT: For western blot, incubate membrane with diluted primary Ab in 5% w/v milk , 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.