Anti-AKT1 Rabbit pAb

Purified Rabbit Polyclonal Antibody

Catalog # P100710

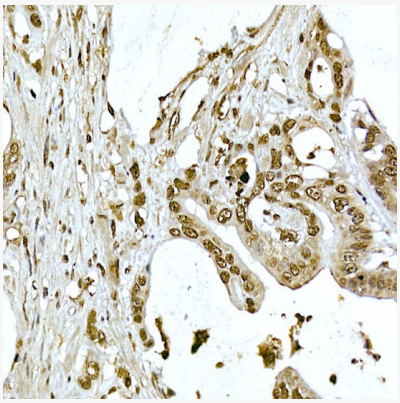
Product Information

Application	WB, IF (Cell)/ICC, IHC-P, ELISA
Reactivity	Human, Mouse, Rat
Dilution	WB 1:500~1:2000; IF 1:50~1:100; IHC-P 1:50~1:200
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Label	Unconjugated
Immunogen	A synthetic peptide corresponding to a sequence within amino acids 350-480 of human AKT1 (NP_005154.2).
Format	Affinity purified polyclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 24 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	Anti-AKT1 Rabbit pAb is for research use only and not for use in diagnostic or therapeutic procedures.

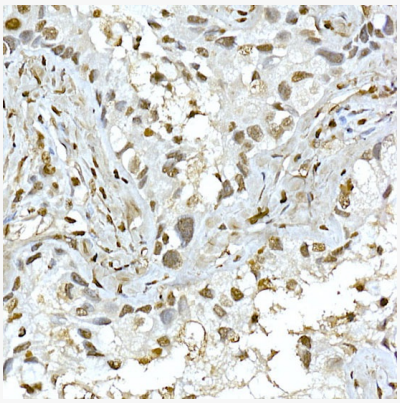
Protein Information

Synonyms	AKT; PKB; RAC; PRKBA; PKB-ALPHA; RAC-ALPHA; AKT1.
Calculated MW	Calculated MW: 56 kDa; Observed MW: 60 kDa
Uniprot ID	P31749
Gene ID	207
Background	This gene encodes one of the three members of the human AKT serine-threonine protein kinase family which are often referred to as protein kinase B alpha, beta, and gamma. These highly similar AKT proteins all have an N-terminal pleckstrin homology domain, a serine/threonine-specific kinase domain and a C-terminal regulatory domain. These proteins are phosphorylated by phosphoinositide 3-kinase (PI3K). AKT/PI3K forms a key component of many signalling pathways that involve the binding of membrane-bound ligands such as receptor tyrosine kinases, G-protein coupled receptors, and integrin-linked kinase. These AKT proteins therefore regulate a wide variety of cellular functions including cell proliferation, survival, metabolism, and angiogenesis in both normal and malignant cells. AKT proteins are recruited to the cell membrane by phosphatidylinositol 3,4,5-trisphosphate (PIP3) after phosphorylation of phosphatidylinositol 4,5-bisphosphate (PIP2) by PI3K. Subsequent phosphorylation of both threonine residue 308 and serine residue 473 is required for full activation of the AKT1 protein encoded by this gene. Phosphorylation of additional residues also occurs, for example, in response to insulin growth factor-1 and epidermal growth factor. Protein phosphatases act as negative regulators of AKT proteins by dephosphorylating AKT or PIP3. The PI3K/AKT signalling pathway is crucial for tumor cell survival. Survival factors can suppress apoptosis in a transcription-independent manner by activating AKT1 which then phosphorylates and inactivates components of the apoptotic machinery. AKT proteins also participate in the mammalian target of rapamycin (mTOR) signalling pathway which controls the assembly of the eukaryotic translation initiation factor 4F (eIF4E) complex and this pathway, in addition to responding to extracellular signals from growth factors and cytokines, is disregulated in many cancers. Mutations in this gene are associated with multiple types

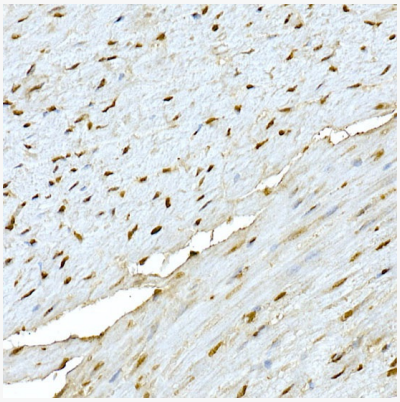
Validation Images



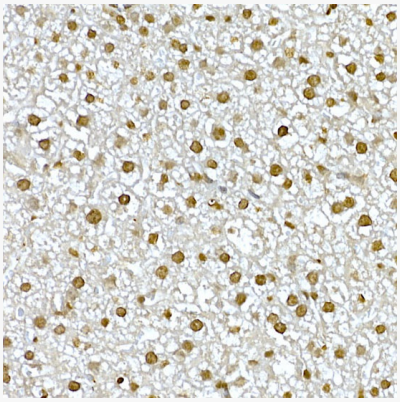
Immunohistochemistry analysis of paraffin-embedded Human colon carcinoma using AKT1 Rabbit pAb (P100710) at dilution of 1:100 (40× lens). High pressure antigen retrieval performed with 0.01M Citrate Bufferr (pH 6.0) prior to IHC staining.



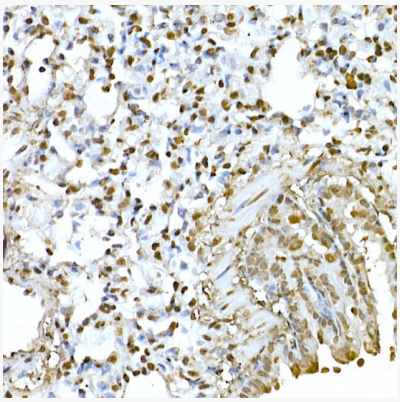
Immunohistochemistry analysis of paraffin-embedded Human lung cancer using AKT1 Rabbit pAb (P100710) at dilution of 1:100 (40× lens). High pressure antigen retrieval performed with 0.01M Citrate Bufferr (pH 6.0) prior to IHC staining.



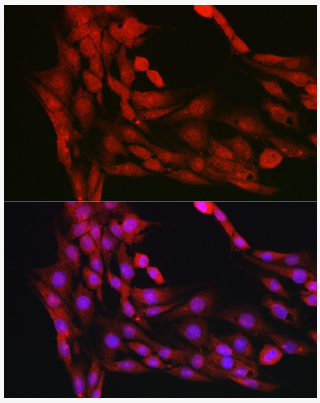
Immunohistochemistry analysis of paraffin-embedded Mouse heart using AKT1 Rabbit pAb (P100710) at dilution of 1:100 (40× lens). High pressure antigen retrieval performed with 0.01M Citrate Bufferr (pH 6.0) prior to IHC staining.



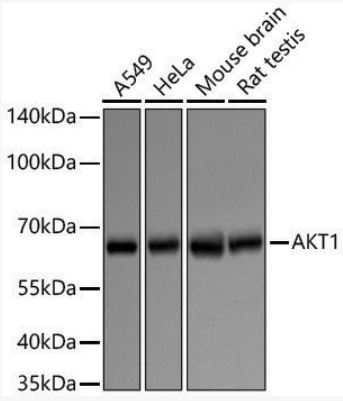
Immunohistochemistry analysis of paraffin-embedded Mouse liver using AKT1 Rabbit pAb (P100710) at dilution of 1:100 (40× lens). High pressure antigen retrieval performed with 0.01M Citrate Bufferr (pH 6.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Rat lung using AKT1 Rabbit pAb (P100710) at dilution of 1:100 (40× lens). High pressure antigen retrieval performed with 0.01M Citrate Bufferr (pH 6.0) prior to IHC staining.



Immunofluorescence analysis of PC-12 cells using AKT1 Rabbit pAb (P100710) at dilution of 1:100 (40× lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) at 1:500 dilution. Blue: DAPI for nuclear staining.



Western blot analysis of various lysates using AKT1 Rabbit pAb (P100710) at 1:1,000 dilution incubated overnight at 4°C.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (LF102) at 1:10,000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Kit.
Exposure time: 30s.