AB-10521 Rabbit Anti- Phospho-Akt (Ser473) Polyclonal Antibody

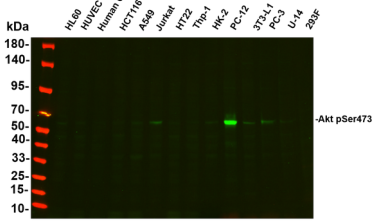
Size: 100 ul

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
WB, IHC , IF	Hu, Ms, Rt, Ch, Gt,	60 kDa	Rabbit IgG

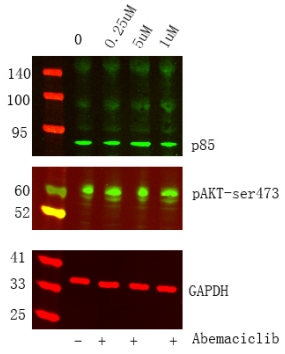
Background: Akt, also referred to as PKB or Rac, plays a critical role in controlling cell survival and apoptosis (1-3). This protein kinase is activated by insulin and various growth and survival factors to function in a wortmannin-sensitive pathway involving PI3 kinase (2,3). Akt is activated by phospholipid binding and activation loop phosphorylation at Thr308 by PDK1 (4) and by phosphorylation within the carboxy terminus at Ser473. The previously elusive PDK2 responsible for phosphorylation of Akt at Ser473 has been identified as mammalian target of rapamycin (mTOR) in a rapamycin-insensitive complex with rictor and Sin1 (5,6). Akt promotes cell survival by inhibiting apoptosis through phosphorylation and inactivation of several targets, including Bad (7), forkhead transcription factors (8), c-Raf (9), and caspase-9. PTEN phosphatase is a major negative regulator of the PI3K/Akt signaling pathway (10). LY294002 is a specific PI3 kinase inhibitor (11). Another essential Akt function is the regulation of glycogen synthesis through phosphorylation and inactivation of GSK-3α and β (12,13). Akt may also play a role in insulin stimulation of glucose transport (12). In addition to its role in survival and glycogen synthesis, Akt is involved in cell cycle regulation by preventing GSK-3β-mediated phosphorylation and degradation of cyclin D1 (14) and by negatively regulating the cyclin-dependent kinase inhibitors p27 Kip1 (15) and p21 Waf1/Cip1 (16). Akt also plays a critical role in cell growth by directly phosphorylating mTOR in a rapamycin-sensitive complex containing raptor (17). More importantly, Akt phosphorylates and inactivates tuberin (TSC2), an inhibitor of mTOR within the mTOR-raptor complex

Purification: Protein A

Immunogen: A synthetic Phosphorylated peptide corresponding to residues target protein



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4℃, over night with a 1:5000 dilution . The AF800-conjugated Goat anti-Rabbit antibody was used to detect the antibody.



Western Blot analysis using HepG2 whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PI3-Kinase p85 α rabbit pAb diluted at 1:2000. anti-AKT (Phospho Ser473) Rabbit mAbdiluted at 1:2000. Loading contrl: Mouse anti GAPDH(1:5000)
Secondary :
AF800, Goat Anti Rabbit IgG(1:10000)
AF680, Goat Anti Rabbit IgG (1:10000)

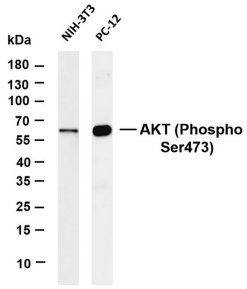
Orders : **sales@immunologicalsciences.com**
Support: info@immunologicalsciences.com
Website: www. immunologicalsciences. com

Buffer: PBS, 50% glycerol, 0.05% Proclin 300, 0.05%protective protein

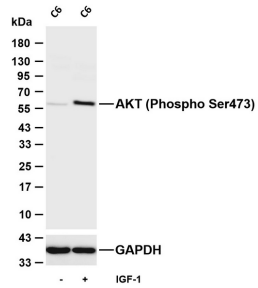
Store at –20°C. *Do not aliquot the antibody.*

Avoid Freezing and Thawing Cycles

Recommended Antibody Dilutions:
Western Blot: 1:1000-1:5000
Immunohistochemistry: 1:200-1:500
Immunofluorescence: 1:200-1:1000



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-AKT (Phospho Ser473) antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody.
Lane 1: NIH-3T3
Lane 2: PC-12
Predicted band size: 55kDa
Observed band size: 60kDa



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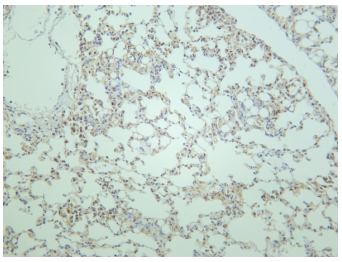
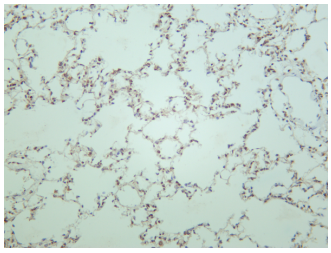
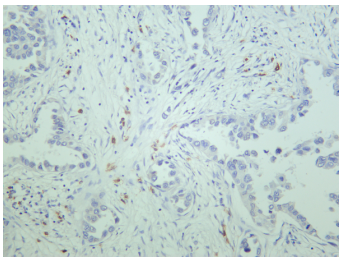
Lane 1: C6
Lane 2: C6 was treated with IGF-1(50ng/mL) for 5 minutes
Predicted band size: 55kDa
Observed band size: 60kDa



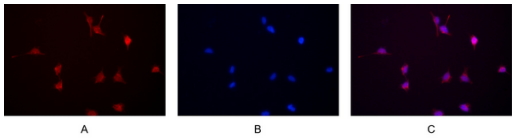
Mouse lung was stained with anti-AKT (Phospho Ser473) rabbit antibody



Rat lung was stained with anti-AKT (Phospho Ser473) rabbit antibody



Human lung carcinoma was stained with anti-AKT (Phospho Ser473) rabbit antibody



Immunofluorescence analysis of HEK293.
Picture A: AKT antibody (red).
Picture B: DAPI (blue).
Picture C: Merge of A+B

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