
AKT1+2+3 Rabbit pAb

Catalog Number: bs-6951R

Target Protein: AKT1+2+3

Concentration: 1mg/ml

Form: Liquid

Host: Rabbit

Clonality: Polyclonal

Isotype: IgG

Applications: WB (1:500-2000), IHC-P (1:100-500), IHC-F (1:100-500), IF (1:100-500), Flow-Cyt (1µg/Test)

Reactivity: Human, Mouse, Rat (predicted:Rabbit, Pig, Sheep, Cow, Chicken, Dog)

Predicted MW: 56 kDa

Entrez Gene: 207

Swiss Prot: P31749

Source: KLH conjugated synthetic peptide derived from human AKT1/2/3: 401-480/480.

Purification: affinity purified by Protein A

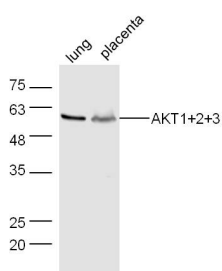
Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.

Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

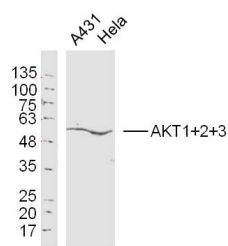
Background: This gene encodes one of the three members of the human AKT serine-threonine protein kinase family which are often referred to as protein kinase B alpha, beta, and gamma. These highly similar AKT proteins all have an N-terminal pleckstrin homology domain, a serine/threonine-specific kinase 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 dysregulated in many cancers. Mutations in this gene are associated with multiple types of cancer and excessive tissue growth including Proteus syndrome and Cowden syndrome 6, and breast, colorectal, and ovarian cancers. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jul 2020]

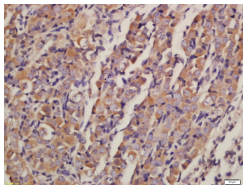
VALIDATION IMAGES



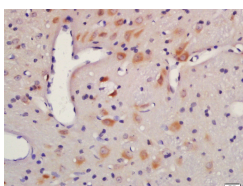
Sample: Lung (Mouse) Lysate at 40 ug Placenta (Mouse) Lysate at 40 ug Primary: Anti-AKT1+2+3 (bs-6951R) at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 56 kD Observed band size: 56 kD



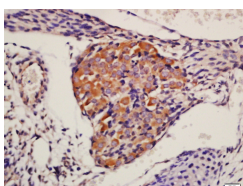
Sample: A431Cell (Human) Lysate at 30 ug HeLa Cell(Human)Lysate at 30 ug Primary: Anti-AKT1+2+3(bs-6951R)at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 50 kD Observed band size: 50 kD



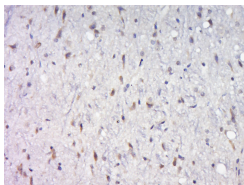
Tissue/cell: Mouse embryos tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-AKT1 + 2 + 3 Polyclonal Antibody, Unconjugated(bs-6951R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-AKT1+2+3 Polyclonal Antibody, Unconjugated(bs-6951R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



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Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (AKT1+2+3) Polyclonal Antibody, Unconjugated (bs-6951R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.

PRODUCT SPECIFIC PUBLICATIONS

[IF=20.693] Myung-Ju Lee. et al. CXCL1 confers a survival advantage in Kaposi's sarcoma-associated herpesvirus-infected human endothelial cells through STAT3 phosphorylation. J MED VIROL. 2022 Jul;; WB ; Human . 35869037

[IF=13] Junwu Wang. et al. Hydrogel and Microgel Collaboration for Spatiotemporal Delivery of Biofactors to Awaken Nucleus Pulposus-Derived Stem Cells for Endogenous Repair of Disc. SMALL. 2024 Sep;;2404732 WB ; Rat . 39308283

[IF=8.7] Xue Sun. et al. An injectable shape-adaptive hydrogel system for subconjunctival injuries: In situ and permanently releases rapamycin to prevent fibrosis via promoting autophagy. MATER TODAY BIO. 2025 Feb;30:101380 IF, WB ; Human . 39790484

[IF=6.638] Wang Z et al. Light-activatable dual prodrug polymer nanoparticle for precise synergistic chemotherapy guided by drug-mediated computed tomography imaging. Acta Biomater. 2019 Aug;94:459-468. WB ; Human . 31128323

[IF=6.8] Ranran Sun. et al. Azadirachtin exposure inhibit ovary development of *Spodoptera litura* (Lepidoptera: Noctuidae) by altering lipids metabolism event and inhibiting insulin signaling pathways. ECOTOX ENVIRON SAFE. 2023 Sep;262:115151 WB ; *Spodoptera litura* . 37356396