bs-5194R **[Primary Antibody]**

phospho-AKT1 (Thr34) Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 207 **SWISS:** P31749

Target: phospho-AKT1 (Thr34)

Immunogen: KLH conjugated Synthesised phosphopeptide derived from human AKT1 around the phosphorylation site of Thr34: DG(p-T)FI.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

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 disregulated 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]

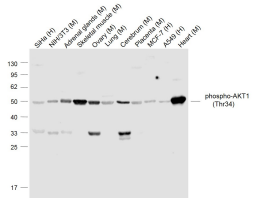
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (2μg/Test)

Reactivity: Human, Mouse, Rat

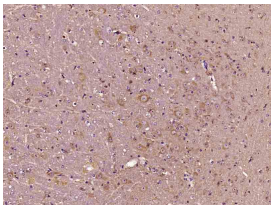
Predicted MW.: 56 kDa

Subcellular Location: Cell membrane ,Cytoplasm ,Nucleus

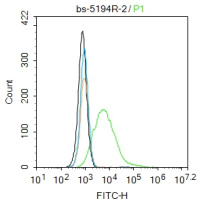
VALIDATION IMAGES



Sample: Lane 1: SiHa (Human) Cell Lysate at 30



Paraformaldehyde-fixed, paraffin embedded

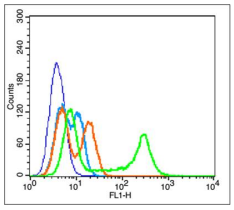


Blank control:A549. Primary Antibody (green

ug Lane 2: NIH/3T3(Mouse) Cell Lysate at 30 ug Lane 3: Adrenal glands (Mouse) Lysate at 40 ug Lane 4: Skeletal muscle (Mouse) Lysate at 40 ug Lane 5: Ovary (Mouse) Lysate at 40 ug Lane 6: Lung (Mouse) Lysate at 40 ug Lane 7: Cerebrum (Mouse) Lysate at 40 ug

(Mouse 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 (phospho-AKT1(Thr34)) Polyclonal Antibody, Unconjugated (bs-5194R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

line): Rabbit Anti-phospho-AKT1 (Thr34) antibody (bs-5194R) Dilution: 2µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-FITC Dilution: 1µg /test. Protocol The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Blank control(blue):EC9706 (fixed with 2% paraformaldehyde for 10 min at 37°C). Primary Antibody:Rabbit Anti-phospho-AKT1(Thr34) antibody (bs-5194R,Green); Dilution: 3µg in 100 µL 1X PBS containing 0.5% BSA; Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions; Secondary Antibody: Goat anti-rabbit IgG-FITC(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

SELECTED CITATIONS

- **[IF=8.2]** Dating Pei. et al. Modulation of macrophage polarization by secondary cross-linked hyaluronan-dopamine hydrogels. INT J BIOL MACROMOL. 2024 Jun;270:132417 WB ;Mouse. 38759857
- **[IF=6.317]** Zheng Ran. et al. Microbiome–metabolomics analysis reveals the potential effect of verbascoside in alleviating cognitive impairment in db/db mice. FOOD FUNCT. 2023 Mar;: WB ;Mouse. 37000613
- **[IF=5.008]** Tan et al. ART3 regulates triple-negative breast cancer cell function via activation of Akt and ERK pathways. (2016) Oncotarge. 7:46589-46602 WB,IHC ;Human. 27374177
- **[IF=3.514]** Li B et al. Resistin up-regulates LPL expression through the PPARγ-dependent PI3K/AKT signaling pathway impacting lipid accumulation in RAW264. 7 macrophages.Cytokine. 2019 Jul;119:168-174. WB ;Mouse. 30925325
- **[IF=4.451]** Lei Wang. et al. Neuroprotective effect of Lactobacillus plantarum DP189 on MPTP-induced Parkinson's disease model mice. J Funct Foods. 2021 Oct;85:104635 WB ;Mouse. 10.1016/j.jff.2021.104635