bs-2720R **[Primary Antibody]**

phospho-AKT1 (Thr308) Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 207 **SWISS:** P31749

Target: AKT1 (Thr308)

Immunogen: KLH conjugated Synthesised phosphopeptide derived from human Akt around the phosphorylation site of Thr308: MK(p-T)FC.

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]

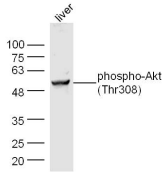
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (1μg /test)

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

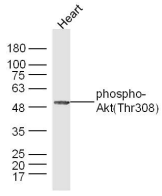
Predicted MW.: 56 kDa

Subcellular Location: Cell membrane ,Cytoplasm ,Nucleus

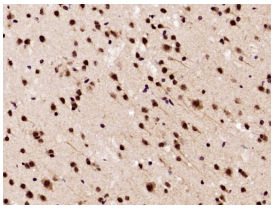
VALIDATION IMAGES



Sample: Liver (Mouse) Lysate at 30 ug Primary:



Western blot analysis of extracts from

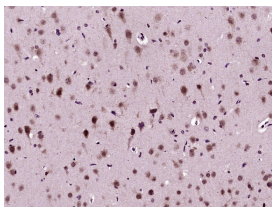


Paraformaldehyde-fixed, paraffin embedded

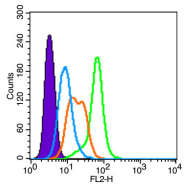
Anti- phospho-Akt（Thr308）(bs-2720R) at 1/300 dilution Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/10000 dilution Predicted band size: 56 kD Observed band size: 56 kD

Heart,using phospho-Akt(thr308) Antibody.

(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-Akt (Thr308)) Polyclonal Antibody, Unconjugated (bs-2720R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



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 (phospho-Akt (Thr308)) Polyclonal Antibody, Unconjugated (bs-2720R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control (blue line): A431(Black). Primary Antibody (green line): Rabbit Anti-phospho-Akt (Thr308) antibody (bs-2720R) Dilution: 1µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE(Jackson lab) Dilution: 1µg /test. Protocol The cells were fixed with 4% paraformaldehyde (10 min) , then permeabilized with 90% ice-cold methanol for 20 min on ice. Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions followed by the antibody for 15 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=13.3]** Yuan Li. et al. A Biomimetic Peptide Functions as Specific Extracellular Matrix for Quiescence of Stem Cells against Intervertebral Disc Degeneration. SMALL. 2023 Jul;:2300578 WB ;Rat. 37423970
- **[IF=11.508]** Qinyu Ma. et al. Osteoclast-derived apoptotic bodies couple bone resorption and formation in bone remodeling. Bone Res. 2021 Jan;9(1):1-12 WB ;Mouse. 33431863
- **[IF=7.74]** Li et al. The dual PI3K/mTOR inhibitor NVP-BEZ235 inhibits proliferation and induces apoptosis of burkitt lymphoma cells. (2015) Cancer.Cell.Int. 15:65 WB ;Human. 26130968
- **[IF=7.65]** Wang Y et al. Targeting the miR-122/PKM2 autophagy axis relieves arsenic stress。 Journal of Hazardous Materials. 2019 Sep. WB ;Chicken. 31546213
- **[IF=7.7]** Pilian Niu. et al. A polysaccharide from Glycyrrhiza uralensis attenuates myocardial fibrosis via modulating the MAPK/PI3K/AKT signaling pathway. INT J BIOL MACROMOL. 2024 Nov;:138207 WB ;Mouse. 39617235