

bsm-52010R**[Primary Antibody]****Bioss**
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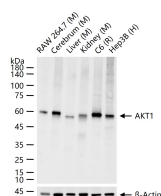
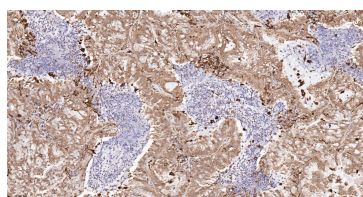
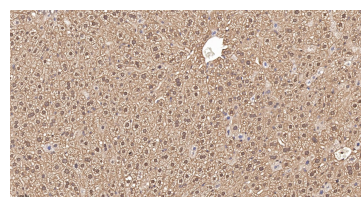
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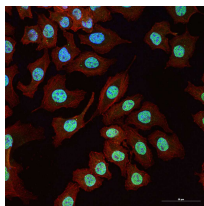
AKT1 Recombinant Rabbit mAb**— DATASHEET —****Host:** Rabbit**Isotype:** IgG**Clonality:** Recombinant**CloneNo.:** 11F2**GeneID:** 207**SWISS:** P31749**Target:** AKT1**Immunogen:** A synthesized peptide derived from human AKT1: 330-479.**Purification:** affinity purified by Protein A**Concentration:** 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 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]

Applications: WB (1:1000-5000)**IHC-P** (1:100-500)**IHC-F** (1:100-500)**IF** (1:100-500)**Flow-Cyt** (1:100-200)**ICC/IF** (1:100-200)**Reactivity:** Human, Mouse, Rat**Predicted
MW.:** 56 kDa**Observed
MW.:** 60 kDa**Subcellular
Location:** Cell membrane ,Cytoplasm
Nucleus**— VALIDATION IMAGES —**25 ug total protein per lane of various lysates
(see on figure) probed with AKT1 monoclonalParaformaldehyde-fixed, paraffin embedded
Human Lung Cancer; Antigen retrieval by boilingParaformaldehyde-fixed, paraffin embedded
Mouse Liver; Antigen retrieval by boiling in

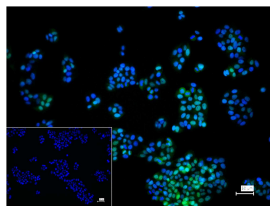
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antibody, unconjugated (bsm-52010R) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



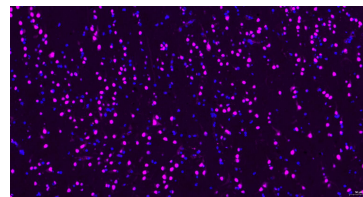
4% Paraformaldehyde-fixed HeLa (H) cell; Triton X-100 at r.t. for 20 min; Antibody incubation with (AKT1) monoclonal Antibody, unconjugated (bsm-52010R) 1:100, 90 min at 37°C; followed by BF488 conjugated Goat Anti-Rabbit IgG antibody (green, bs-60295G-BF488) at 37°C for 90 min, then stained with Phalloidin/BF555 for 30 min at room temperature; DAPI (blue, C02-04002) was used to stain the cell nuclei.

in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with AKT1 Monoclonal Antibody, Unconjugated (bsm-52010R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.

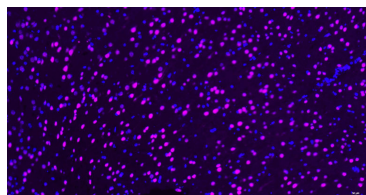


4% Paraformaldehyde-fixed Hep3B (H) cell; Triton X-100 at r.t. for 20 min; Antibody incubation with (AKT1) monoclonal Antibody, unconjugated (bsm-52010R) 1:100, 90 min at 37°C; followed by BF488 conjugated Goat Anti-Rabbit IgG antibody (green, bs-60295G-BF488) at 37°C for 90 min, DAPI (blue, C02-04002) was used to stain the cell nuclei. PBS instead of the primary antibody was used as the blank control.

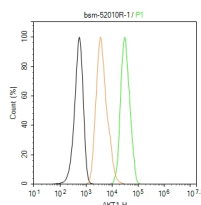
sodium citrate buffer (pH6.0) for 15 min; The section was incubated with AKT1 Monoclonal Antibody, Unconjugated (bsm-52010R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Human brain; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with AKT1 Monoclonal Antibody, Unconjugated (bsm-52010R) at 1:200 overnight at 4°C, followed by a Cy5 conjugated Goat Anti-Rabbit IgG (bs-0295G-Cy5) antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



Paraformaldehyde-fixed, paraffin embedded Mouse brain; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with AKT1 Monoclonal Antibody, Unconjugated (bsm-52010R) at 1:200 overnight at 4°C, followed by a Cy5 conjugated Goat Anti-Rabbit IgG (bs-0295G-Cy5) antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



The HeLa (H) cells were fixed with 4% PFA (10 min at r.t.) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C, the cells then were incubated in 5% BSA to block non-specific protein-protein interactions (30 min at r.t.), followed by secondary antibody incubation for 40 min at room temperature. Primary Antibody (green): Rabbit Anti-AKT1 antibody (bsm-52010R, 1:100); Isotype Control (orange): Rabbit IgG (bs-0295P). Blank control (black): PBS. Acquisition of 20,000 events was performed.

— SELECTED CITATIONS —

- **[IF=18]** Tingshan Xiao. et al. Tailoring therapeutics via a systematic beneficial elements comparison between photosynthetic bacteria-derived OMVs and extruded nanovesicles. *BIOACT MATER.* 2024 Jun;36:48 WB,IF ;Mouse. 38434148
- **[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=5.7]** Zeyu Zhang. et al. Optimized New Shengmai Powder suppresses ferroptosis in ischemic cardiomyocytes via cGMP-PKG signalling. *CHIN MED-UK.* 2026 Mar;21:78 WB,IF ;Rat. 41787520
- **[IF=5.4]** Wenjing Li. et al. Exploring the mechanism of dihydromyricetin in alleviating psoriasis based on metabolomics, network pharmacology and experimental validation. *J ETHNOPHARMACOL.* 2026 Apr;360:121167 WB ;Mouse. 41539635
- **[IF=4.9]** Limei Wen. et al. Synergistic and toxicity-reducing effects of acteoside as an adjuvant therapy of oxaliplatin against hepatocellular carcinoma. *INT J ONCOL.* 2025 Jun;66(6):1-18 WB ;Mouse. 40341416