bsm-52129R **[Primary Antibody]**

phospho-AKT (Ser124) Recombinant Rabbit mAb

www.bioss.com.cn
sales@bioss.com.cn
techsupport@bioss.com.cn
400-901-9800

DATASHEET

Host: Rabbit
Isotype: IgG
Clonality: Recombinant
CloneNo.: 2A1
GeneID: 207
SWISS: P31749
Target: AKT (Ser124)

Immunogen: KLH conjugated Synthesised phosphopeptide derived from human Akt1 around the phosphorylation site of Ser124: SG(p-S)PS.

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]

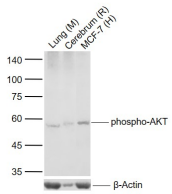
Applications: **WB** (1:500-1000)
IHC-P (1:100-500)
IHC-F (1:50-100)
IF (1:50-100)
ICC/IF (1:50-100)

Reactivity: Human, Mouse, Rat

Predicted MW.: 56 kDa

Subcellular Location: Cell membrane ,Cytoplasm ,Nucleus

VALIDATION IMAGES



Sample: Lane 1: Mouse Lung tissue lysates Lane

2: Rat Cerebrum tissue lysates Lane 3: Human MCF-7 cell lysates Primary: Anti-phospho-AKT (Ser124) (bsm-52129R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 56 kDa Observed band size: 56 kDa

SELECTED CITATIONS

- **[IF=5.4]** Xiaobo Xu. et al. CD74–ROS1 L2026M mutant enhances autophagy through the MEK/ERK pathway to promote invasion, metastasis and crizotinib resistance in non-small cell lung cancer cells. FEBS J. 2023 Dec;: WB ;Human. 38148635
- **[IF=5.2]** Yong Wei. et al. Network pharmacology and experimental evaluation strategies to decipher the underlying pharmacological mechanism of Traditional Chinese Medicine CFF-1 against prostate cancer. AGING-US. 2024 Mar 31; 16(6): 5387–5411 WB ;Human. 38484140
- **[IF=3.3]** Hong Zhao. et al. The anti-hyperplasia effect of polysaccharide from Prunella vulgaris L. on mammary gland hyperplasia in rats through regulation of the AKT-FOXO3a signaling pathway and intestinal flora. J SCI FOOD AGR. 2024 Jun;: WB ;Rat. 38872513