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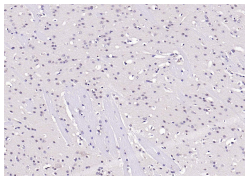
phospho-AKT (Ser473) Mouse mAb

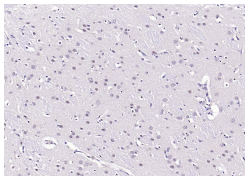
Catalog Number:	bsm-33281M
Target Protein:	phospho-AKT (Ser473)
Concentration:	1mg/ml
Form:	Size : 50ul/100ul/200ul Liquid Size : 200ug (PBS only) Lyophilized Note: Centrifuge tubes before opening. Reconstitute the lyophilized product in distilled water. Optimal concentration should be determined by the end user.
Host:	Mouse
Clonality:	Monoclonal
Clone No.:	9H11
Isotype:	IgG
Applications:	IHC-P (1:100-500), IHC-F (1:500-1000), IF (1:500-1000)
Reactivity:	Human, Mouse, Rat (predicted:Rabbit, Pig, Sheep, Cow, Dog)
Predicted MW:	56 kDa
Entrez Gene:	207
Swiss Prot:	P31749
Source:	KLH conjugated Synthesised phosphopeptide derived from human AKT around the phosphorylation site of Ser473: QF(p-S)YS.
Purification:	affinity purified by Protein G
Storage:	Size : 50ul/100ul/200ul 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Size : 200ug (PBS only) 0.01M PBS 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]

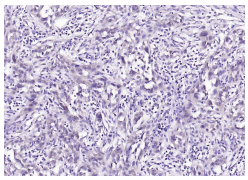
VALIDATION IMAGES



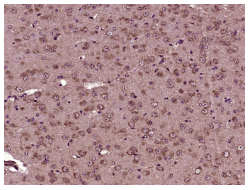
Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-AKT (Ser473)) Monoclonal Antibody, Unconjugated (bsm-33281M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.



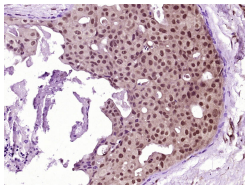
Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-AKT (Ser473)) Monoclonal Antibody, Unconjugated (bsm-33281M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.



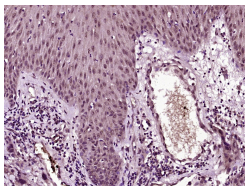
Paraformaldehyde-fixed, paraffin embedded (human gastric carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-AKT (Ser473)) Monoclonal Antibody, Unconjugated (bsm-33281M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (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 (Ser473)) Monoclonal Antibody, Unconjugated (ascites of bsm-33281M 9H11) at 1:2000 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Human breast carcinoma); 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 (Ser473)) Monoclonal Antibody, Unconjugated (ascites of bsm-33281M 9H11) at 1:2000 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Human skin carcinoma); 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 (Ser473)) Monoclonal Antibody, Unconjugated (ascites of bsm-33281M 9H11) at 1:2000 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.

PRODUCT SPECIFIC PUBLICATIONS

[IF=6.639] Qun Lin. et al. Silencing CTNND1 Mediates Triple-Negative Breast Cancer Bone Metastasis via Upregulating CXCR4/CXCL12 Axis and Neutrophils Infiltration in Bone. Cancers. 2021 Jan;13(22):5703 IHC ; Human . 34830862

[IF=4.885] Jiakun Dai. et al. Multimeric adiponectin nanoparticles regulate glucose metabolism by activating phosphatidylinositol-3-kinase, protein kinase B and T-cadherin. PROCESS BIOCHEM. 2022 Dec;: WB,IHC ; Mouse . 10.1016/j.procbio.2022.12.034

[IF=3.943] Le Tian. et al. Luteolin as an adjuvant effectively enhances CTL anti-tumor response in B16F10 mouse model. Int Immunopharmacol. 2021 May;94:107441 WB ; Mouse . 33611060

[IF=3.448] Zhang H et al. Ginsenoside Rb1 promotes the growth of mink hair follicle via PI3K/AKT/GSK-3β signalingpathway. Life Sci. 2019 Jul 15;229:210-218. WB ; Mink . 31102746

[IF=2.276] Sun Y et al. Shenmai Injection Supresses Glycolysis and Enhances Cisplatin Cytotoxicity in Cisplatin-Resistant A549/DDP Cells via the AKT-mTOR-c-Myc Signaling Pathway. Biomed Res Int. 2020 Jun 20;2020:9243681. WB ; Human . 32685545