OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA319562

AKT1 Mouse Monoclonal Antibody [Clone ID: 17F6.B11]

Product data:

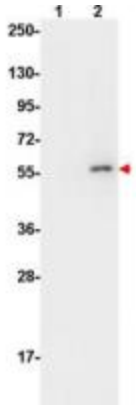
Product Type:	Primary Antibodies
Clone Name:	17F6.B11
Applications:	IF, IHC, WB
Recommend Dilution:	ELISA: 1:20,000, WB: 1:500-1:3,000, IHC: 20 ug/mL, IF: 1:500-1:3,000
Reactivity:	Human, Monkey, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Immunogen:	Anti-AKT pS473 (MOUSE) Monoclonal Antibody was produced by repeated immunizations with a synthetic peptide corresponding to residues surrounding S473 of human AKT1 protein, followed by hybridoma development.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	1.02mg/ml
Gene Name:	AKT serine/threonine kinase 1
Database Link:	NP_001014431 Entrez Gene 11651 MouseEntrez Gene 24185 RatEntrez Gene 697747 MonkeyEntrez Gene 207 Human
Synonyms:	AKT; CWS6; PKB; PKB-ALPHA; PRKBA; RAC; RAC-ALPHA
Note:	Phospho AKT antibody is suitable for ELISA, immunohistochemistry, immunoprecipitation and western blotting. AKT phospho 473 is a component of the PI-3 kinase pathway and is activated by phosphorylation at Ser 473 and Thr 308. AKT is a cytoplasmic protein also known as AKT1, Protein Kinase B (PKB) and rac (related to A and C kinases). AKT is a key regulator of many signal transduction pathways. AKT Exhibits tight control over cell proliferation and cell viability. Overexpression or inappropriate activation of AKT is noted in many types of cancer. AKT mediates many of the downstream events of PI 3-kinase (a lipid kinase activated by growth factors, cytokines and insulin). PI 3-kinase recruits AKT to the membrane, where it is activated by PDK1 phosphorylation. Once phosphorylated, AKT dissociates from the membrane and phosphorylates targets in the cytoplasm and the cell nucleus. AKT has two main roles: (i) inhibition of apoptosis; (ii) promotion of proliferation. Anti-AKT pS473 (MOUSE) Monoclonal Antibody is ideal for investigators involved in Cell Signaling, Cancer, Neuroscience, Signal Transduction research.

View online »

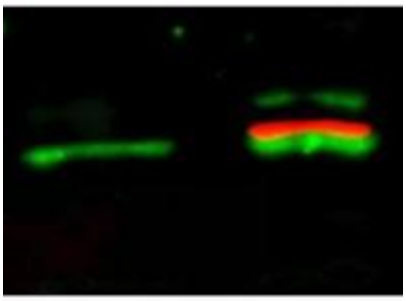
Protein Families: Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase

Protein Pathways: Acute myeloid leukemia, Adipocytokine signaling pathway, Apoptosis, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Glioma, Insulin signaling pathway, Jak-STAT signaling pathway, MAPK signaling pathway, Melanoma, mTOR signaling pathway, Neurotrophin signaling pathway, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Progesterone-mediated oocyte maturation, Prostate cancer, Renal cell carcinoma, Small cell lung cancer, T cell receptor signaling pathway, Tight junction, Toll-like receptor signaling pathway, VEGF signaling pathway

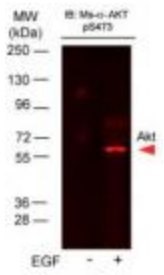
Product images:



WB of Mouse Anti-AKT pS473 antibody. Lane 1: non-phosphorylated AKT in untreated cells. Lane 2: phosphorylated AKT (indicated by arrowhead at ~56 kDa) on PDGF stimulated NIH/3T3 cell lysates. Load: 10 ug per lane. Primary antibody: AKT pS473 antibody at 1:10,000 in TBS with 0.05% Tween-20 with 1% BSA, for 1 h at 4°C. Secondary antibody: HRP conjugated Gt-a-Mouse IgG (p/n 610-103-121) was used at a 1:20,000 dilution.

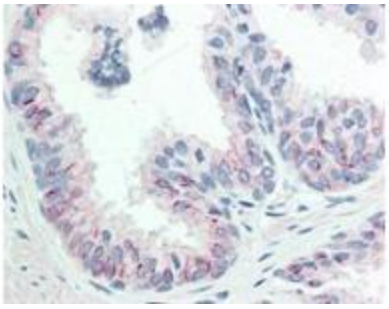


WB of Mouse Anti-Akt pS473 antibody. Lane 1: unstimulated NIH/3T3 lysates contain inactive unphosphorylated Akt1, green band. Lane 2: PDGF stimulated NIH/3T3 lysate contains both inactive (green band) and activated phosphorylated Akt1 (red band). Load: 10 ug per lane. Primary antibody: rabbit anti-Akt (pan) and mouse anti-Akt pS473 specific antibodies at 1:400. Secondary antibody: DyLight™ 549 conjugated anti-rabbit IgG (green) and DyLight™ 649 conjugated anti-mouse IgG (red) at 1:10,000.

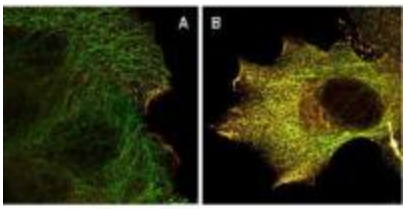


Western Blot of Mouse Anti-AKTpS473 antibody. Lane 1: A431 cells. Lane 2: A431 cells stimulated for 15 min with EGF. Load: 35 ug per lane. Primary antibody: AKTpS473 antibody at 1:400 for overnight at 4°C. Secondary antibody: DyLight™649 Conjugated Anti-AKT pS473 Monoclonal Antibody p/n 200-343-268 at 1:10,000 for 45 min at RT. Block: Blocking Buffer for Fluorescent Western Blotting p/n MB-070 overnight at 4°C. Predicted/Observed size: 56kDa. Other band (s): none.

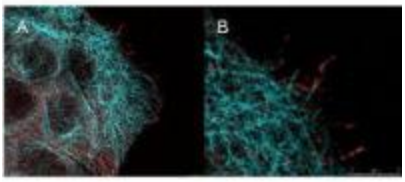
WB of Mouse Anti-Akt pS473 antibody. A Lane 1) PDGF stimulated NIH 3T3 cells 10 ÂµI Lane 2) NIH 3T3 cells 10 µl Lane 3) Hela whole cell lysate 10 µl (weak signal) B Lane 4) GST negative control protein 100 ng Lane 5) GST negative control protein 25 ng Lane 6) AKT 1 recombinant protein 100 ng Lane 7) AKT 1 recombinant protein 25 ng Block: 5% BSA overnight at 4°C. Primary antibody: monoclonal anti AKT antibody used at 1:1000. Secondary antibody: HRP Conjugated goat anti mouse 1:25K.



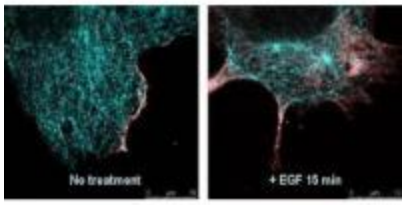
Immunohistochemistry of Mouse anti-AKT pS473 antibody. Tissue: human prostate tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: AKT pS473 antibody at 20 ug/mL for 1 h at RT. Secondary antibody: Dako's Techmate streptavidin-biotin reagents at 1:10,000 for 45 min at RT. Localization: AKT pS473 is nuclear and occasionally cytoplasmic. Staining: AKT pS473 as precipitated red signal with hematoxylin purple nuclear counterstain.



IF of Mouse Anti-AKTpS473 antibody using STED nanoscopy to evaluate AKT activation and migration. Tissue: A431 cells. Antigen retrieval: Panel A: serum starved, unstimulated cells. Panel B: serum starved, EGF stimulated for 15 mins.



High resolution STED IF nanoscopy of Mouse anti-AKT pS473 antibody. Tissue: A431 cells. The merge images (A) and at high magnification (B) show phosphorylated AKT colocalized with the distal microtubules. Primary antibody: AKT pS473 antibody at 10 ug/mL and a-tubulin (cyan) at 1.4 ug/mL for 1 h at RT. Secondary antibody: Atto 647N anti-Mouse IgG (ATTO TEC GmbH), and DyLight™488 anti-Rabbit IgG were used at 1.0 ug/mL for 1h at RT for indirect detection.



Immunofluorescence confocal microscopy of Mouse Anti-AKT pS473 antibody. Tissue: EGF treated A431 cells. Fixation: 0.5% PFA. Antigen retrieval: EGF 15 min. Primary antibody: AKT pS473 antibody at 10 ug/mL for 1 h at RT. Secondary antibody: DyLight 488™ Goat anti-Rabbit IgG, MAb anti-AKT pS473, atto-647N anti-Mouse IgG (Active Motif). at 1:10,000 for 45 min at RT. Localization: AKT pS473 is nuclear and occasionally cytoplasmic. Staining: AKT pS473 as red signal with tubulin (cyan).