

Mouse Akt, pan Monoclonal Antibody | anti-Akt1 antibody

Akt, pan (Rac PKa, PKBa)

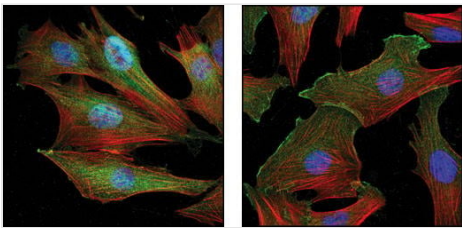
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA14695	Mouse	Human, Monkey, Mouse, Rat	Western Blot, Immunoprecipitation, Immunohistochemistry, Flow Cytometry, Functional Assay, Immunofluorescence

PRODUCT SYNONYMS

Akt; pan; Monoclonal Antibody; pan (Rac PKa; PKBa); Anti -Akt; anti-Akt1 antibody

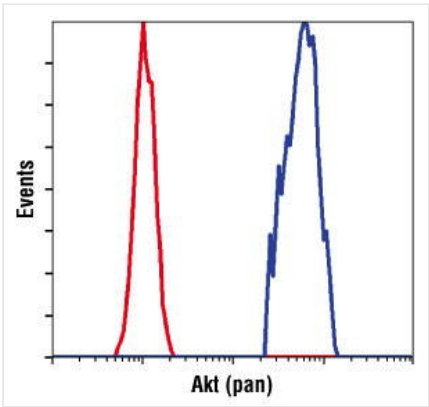
PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human, Monkey, Mouse, Rat
Clonality	Monoclonal
Isotype	IgG1k
Clone Number	10g142
Specificity	Recognizes endogenous levels of total Akt protein, does not cross-react with other related proteins. Species crossreactivity: Mouse, rat and monkey.
Purity/Purification	Ascites Ascites
Form/Format	Supplied as a liquid in 10mM sodium HEPES pH 7.5, 150mM NaCl, 0.1mg/ml BSA, < 0.02% sodium azide, 50% glycerol.
Applicable Applications for anti-Akt1 antibody	WB (Western Blot), IP (Immunoprecipitation), IHC (Immunohistochemistry), FCM/FACS (Flow Cytometry), IF (Immunofluorescence)
Application Notes	Suitable for use in Immunofluorescence, Flow Cytometry, Western Blot, Immunoprecipitation and Immunohistochemistry. Dilution: Immunofluorescence (IF-IC): 1:50 Flow Cytometry: 1:50 Western Blot: 1:2000 Immunoprecipitation: 1:50 Immunohistochemistry (Paraffin): 1:250
Immunogen	Synthetic peptide at the carboxy-terminal sequence of human Akt.
Preparation and Storage	May be stored at 4 degree C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20 degree C. Aliquots are stable for at least 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.



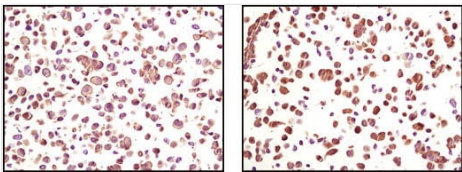
IF (Immunofluorescence)

Confocal immunofluorescent analysis of C2C12 cells, either LY294002-treated (left) or insulin-treated (right), using AAA14695 (green). Actin filaments have been labeled with DY554 phalloidin (red). Blue pseudocolor = DRAQ5 (fluorescent DNA dye).



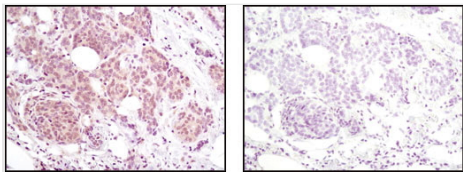
FCM (Flow Cytometry)

Flow cytometric analysis of untreated Jurkat cells using AAA14695 (blue) compared to a nonspecific negative control antibody (red).



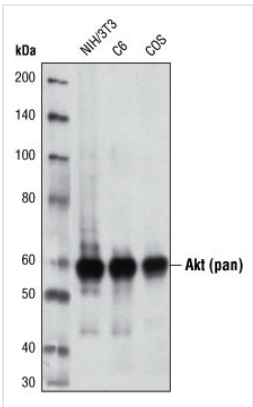
IHC (Immunohistochemistry)

Immunohistochemical analysis using AAA14695 on SignalSlide; Phospho-Akt (Ser473) IHC Controls (paraffin-embedded LNCaP cells, untreated (left) or LY294002-treated (right)).



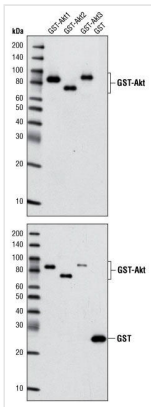
IHC (Immunohistochemistry)

Immunohistochemical analysis of paraffin-embedded human breast carcinoma using AAA14695 in the presence of control peptide (left) or Akt (pan) Blocking Peptide (right).



WB (Western Blot)

Western blot analysis of extracts from NIH/3T3, C6 and COS cells using AAA14695.



WB (Western Blot)

Western blot analysis of recombinant Akt1, Akt2, Akt3 and GST proteins using AAA14695 (upper) and GST (91G1) Rabbit mAb (lower).

ADDITIONAL INFORMATION

Related Product Information for anti-Akt1 antibody	Akt, also referred to as PKB or Rac, plays a critical role in controlling survival and apoptosis (1-3). This protein kinase is activated by insulin and various growth and survival factors to function in a wortmannin-sensitive pathway involving PI3 kinase (2,3). Akt is activated by phospholipid binding and activation loop phosphorylation at Thr308 by PDK1 (4) and by phosphorylation within the carboxy terminus at Ser473. The previously elusive PDK2 responsible for phosphorylation of Akt at Ser473 has been identified as mammalian target of rapamycin (mTOR) in a rapamycin-insensitive complex with rictor and Sin1 (5,6). Akt promotes cell survival by inhibiting apoptosis through phosphorylation and inactivation of several targets, including Bad (7), forkhead transcription factors (8), c-Raf (9) and caspase-9. PTEN phosphatase is a major negative regulator of the PI3 kinase/Akt signaling pathway (10). LY294002 is a specific PI3 kinase inhibitor (11). Another essential Akt function is the regulation of glycogen synthesis through phosphorylation and inactivation of GSK-3alpha and beta (12,13). Akt may also play a role in insulin stimulation of glucose transport (12). In addition to its role in survival and glycogen synthesis, Akt is involved in cell cycle regulation by preventing GSK-3beta mediated phosphorylation and degradation of cyclin D1 (14) and by negatively regulating the cyclin dependent kinase inhibitors p27 Kip (15) and p21 Waf1/CIP1 (16). Akt also plays a critical role in cell growth by directly phosphorylating mTOR in a rapamycin-sensitive complex containing raptor (17). More importantly, Akt phosphorylates and inactivates tuberlin (TSC2), an inhibitor of mTOR within the mTOR-raptor complex (18). Inhibition of mTOR stops the protein synthesis machinery by inactivating p70 S6 kinase and activating the eukaryotic initiation factor 4E binding protein 1 (4E-BP1), an inhibitor of translation (18,19).
Product Categories/Family for anti-Akt1 antibody	Antibodies; Abs to Protein Kinases

NCBI AND UNIPROT INFORMATION

NCBI GI #	24647360
NCBI GeneID	41957
NCBI Accession #	NP_732115.1
NCBI GenBank Nucleotide #	NM_169707.1
UniProt Accession #	Q8INB9; Q0KI65; Q24293; Q24469; Q24470; Q7JN11; Q8T9A5; Q9VEY7
Molecular Weight	68,485 Da
NCBI Official Full Name	Akt1, isoform B
NCBI Official Symbol	Akt1
NCBI Official Synonym Symbols	akt; Akt; AKT; Akt/PKB; AKT/PKB; akt1; AKT1; Akt1 PKB; CG4006; D-Akt; dakt; dAkt; dAKT; Dak1; DAK1; dAKT/dPKB; dAkt/PKB; dakt1; dAkt1; dAKT1; Dak1; DAK1; DAKT1; DAKT1/PKB; DmelCG4006; dPKB; Dpkb; DPKB; DRAC-PK; DRAC-PK66; DRAC-PK85; I(3)04226; I(3)89Bq;
NCBI Protein Information	CG4006 gene product from transcript CG4006-RA; Akt kinase; Akt1; Akt1-PA; Akt1-PB; Akt1-PC; CG4006-PA; CG4006-PB; CG4006-PC; dAkt kinase; protein kinase B; related to PKA to PKC protein kinases; related to the A and C kinases
UniProt Protein Name	RAC serine/threonine-protein kinase
UniProt Gene Name	Akt1
UniProt Synonym Gene Names	DAKT; DRAC-PK; Dak1; PKB
UniProt Entry Name	AKT1_DROME

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/monoclonal/akt-pan-antibody-clone-10g142-western-blot-immunoprecipitation-immunohistochemistry-flow-cytometry-immunofluorescence-elisa/14695>