

Rabbit Akt2 Polyclonal Antibody | anti-AKT2 antibody

Akt2 (phospho Ser474) Polyclonal Antibody

CATALOG # AAA293859	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

Akt2; Polyclonal Antibody; Akt2 (phospho Ser474) Polyclonal Antibody; AKT2; RAC-beta serine/threonine-protein kinase; Protein kinase Akt-2; Protein kinase B beta; PKB beta; RAC-PK-beta; anti-AKT2 antibody

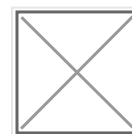
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Applicable Applications for anti-AKT2 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.

IMAGES


WB (Western Blot)

Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000.
Not yet tested in other applications.


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Not yet tested in other applications.

ADDITIONAL INFORMATION

Related Product Information for anti-AKT2 antibody	AKT2 is one of 3 closely related serine/threonine- protein kinases (AKT1, AKT2 and AKT3) called the AKT kinase, and which regulate many processes including metabolism, proliferation, cell survival, growth and angiogenesis. This is mediated through serine and/or threonine phosphorylation of a range of downstream substrates. Over 100 substrate candidates have been reported so far, but for most of them, no isoform specificity has been reported. AKT is responsible of the regulation of glucose uptake by mediating insulin-induced translocation of the SLC2A4/GLUT4 glucose transporter to the cell surface. Phosphorylation of PTPN1 at 'Ser-50' negatively modulates its phosphatase activity preventing dephosphorylation of the insulin receptor and the attenuation of insulin signaling. Phosphorylation of TBC1D4 triggers the binding of this effector to inhibitory 14-3-3 proteins, which is required for insulin-stimulated glucose transport. AKT regulates also the storage of glucose in the form of glycogen by phosphorylating GSK3A at 'Ser-21' and GSK3B at 'Ser-9', resulting in inhibition of its kinase activity. Phosphorylation of GSK3 isoforms by AKT is also thought to be one mechanism by which cell proliferation is driven. AKT regulates also cell survival via the phosphorylation of MAP3K5 (apoptosis signal-related kinase). Phosphorylation of 'Ser-83' decreases MAP3K5 kinase activity stimulated by oxidative stress and thereby prevents apoptosis. AKT mediates insulin-stimulated protein synthesis by phosphorylating TSC2 at 'Ser-939' and 'Thr-1462', thereby activating mTORC1 signaling and leading to both phosphorylation of 4E-BP1 and in activation of RPS6KB1. AKT is involved in the phosphorylation of members of the FOXO factors (Forkhead family of transcription factors), leading to binding of 14-3-3 proteins and cytoplasmic localization. In particular, FOXO1 is phosphorylated at 'Thr-24', 'Ser-256' and 'Ser-319'. FOXO3 and FOXO4 are phosphorylated on equivalent sites. AKT has an important role in the regulation of NF-kappa-B- dependent gene transcription and positively regulates the activity of CREB1 (cyclic AMP (cAMP)- response element binding protein). The phosphorylation of CREB1 induces the binding of accessory proteins that are necessary for the transcription of pro-survival genes such as BCL2 and MCL1. AKT phosphorylates 'Ser-454' on ATP citrate lyase (ACLY), thereby potentially regulating ACLY activity and fatty acid synthesis. Activates the 3B isoform of cyclic nucleotide phosphodiesterase (PDE3B) via phosphorylation of 'Ser-273', resulting in reduced cyclic AMP levels and inhibition of lipolysis. Phosphorylates PIKFYVE on 'Ser-318', which results in increased PI (3)P-5 activity. The Rho GTPase-activating protein DLC1 is another substrate and its phosphorylation is implicated in the regulation cell proliferation and cell growth. AKT plays a role as key modulator of the AKT-mTOR signaling pathway controlling the tempo of the process of newborn neurons integration during adult neurogenesis, including correct neuron positioning, dendritic development and synapse formation. Signals downstream of phosphatidylinositol 3-kinase (PI (3)K) to mediate the effects of various growth factors such as platelet-derived growth factor (PDGF), epidermal growth factor (EGF), insulin and insulin-like growth factor I (IGF-I). AKT mediates the antiapoptotic effects of IGF-I. Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly. May be involved in the regulation of the placental development.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4502023
NCBI GeneID	208
NCBI Accession #	NP_001617.1
NCBI GenBank Nucleotide #	NM_001626.4
UniProt Accession #	P31751; Q0VAN1; Q68GC0; B2RBD8
Molecular Weight	55,769 Da
NCBI Official Full Name	RAC-beta serine/threonine-protein kinase isoform 1
NCBI Official Synonym Full Names	v-akt murine thymoma viral oncogene homolog 2
NCBI Official Symbol	AKT2
NCBI Official Synonym Symbols	PKBB; PRKBB; HIHGHH; PKBBETA; RAC-BETA
NCBI Protein Information	RAC-beta serine/threonine-protein kinase; PKB beta; RAC-PK-beta; protein kinase Akt-2; protein kinase B beta; rac protein kinase beta; murine thymoma viral (v-akt) homolog-2
UniProt Protein Name	RAC-beta serine/threonine-protein kinase
UniProt Gene Name	AKT2
UniProt Synonym Gene Names	PKB beta

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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/akt2-antibody-immunohistochemistry-western-blot-elisa/293859>