



Anti-AKT1 monoclonal antibody, clone 29G4.I22 (DCABH-59)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Mouse monoclonal to AKT1 (phospho T308)
Antigen Description	Plays a role as a 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 (By similarity). General protein kinase capable of phosphorylating several known proteins. Phosphorylates TBC1D4. 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). Plays a role in glucose transport by mediating insulin-induced translocation of the GLUT4 glucose transporter to the cell surface. Mediates the antiapoptotic effects of IGF-I. 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. Promotes glycogen synthesis by mediating the insulin-induced activation of glycogen synthase. The activated form can suppress FoxO gene transcription and promote cell cycle progression. Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly.
Specificity	Specific for AKT protein phosphorylated at T308. Cross reactivity with AKT2 and AKT3 will likely occur.
Immunogen	Synthetic peptide corresponding to residues surrounding the internal sequence amino acid T308 of Human AKT1 protein.
Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Mouse, Human
Clone	29G4.I22

Purification	Purified from concentrated tissue culture supernate.
Conjugate	Unconjugated
Applications	IP, WB, ELISA, IHC-P
Positive Control	PDGF stimulated NIH/3T3 cell lysates; Human brain cerebellum tissue
Format	Liquid
Size	100 µg
Buffer	pH: 7.20; Preservative: 0.01% Sodium azide; Constituents: 0.42% Potassium phosphate, 0.88% Sodium chloride
Preservative	0.01% Sodium Azide
Storage	Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C long term. Avoid repeated freeze / thaw cycles.

GENE INFORMATION

Gene Name	AKT1 v-akt murine thymoma viral oncogene homolog 1 [Homo sapiens]
Official Symbol	AKT1
Synonyms	AKT1; v-akt murine thymoma viral oncogene homolog 1; RAC-alpha serine/threonine-protein kinase; AKT; PKB; PRKBA; RAC; PKB alpha; RAC-PK-alpha; proto-oncogene c-Akt; protein kinase B alpha; rac protein kinase alpha; PKB-ALPHA; RAC-ALPHA; MGC99656;
Entrez Gene ID	207
Protein Refseq	NP_001014431
UniProt ID	B0LPE5
Chromosome Location	14q32.32-q32.33
Pathway	AKT phosphorylates targets in the cytosol, organism-specific biosystem; AKT phosphorylates targets in the nucleus, organism-specific biosystem; AKT-mediated inactivation of FOXO1A, organism-specific biosystem; Activation of BAD and translocation to mitochondria, organism-specific biosystem; Activation of BH3-only proteins, organism-specific biosystem; Acute myeloid leukemia, organism-specific biosystem; Acute myeloid leukemia, conserved biosystem;

Function

ATP binding; ATP binding; enzyme binding; identical protein binding; kinase activity; nitric-oxide synthase regulator activity; nucleotide binding; phosphatidylinositol-3,4,5-trisphosphate binding; phosphatidylinositol-3,4-bisphosphate binding; protein bi
