PRODUCT DATA SHEET

Akt(pan) mouse mAb

Catalog No.	IMB0210
Reactivity	Mouse;Rat
Applications	WB
Gene Name	akt
Protein Name	-
Human Gene Id	207;208;10000
Swiss-Prot	P31749;P31751;Q9Y243
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Monoclonal, Mouse
Dilution	WB: 1:1000
PurIF:ication	The antibody was affinity-purIF:ied from mouse ascites by affinity-chromatography using epitope-specIF:ic immunogen.
Concentration	1 mg/ml
Storage&Stability	-20°C/1 year
Background	catalytic activity:ATP + a protein = ADP + a phosphoprotein.,disease:Defects in AKT1 are associated with breast cancer (BC) [MIM:114480]. BC is an extremely common malignancy, affecting one in eight women during their lIF:etime.,disease:Defects in AKT1 are associated with colorectal cancer (CRC) [MIM:114500].,disease:Defects in AKT1 are associated with susceptibility to ovarian cancer [MIM:604370]; also called susceptibility to familial breast-ovarian cancer type 1 (BROVCA1).,domain:Binding of the PH domain to the phosphatidylinositol 3-kinase alpha (PI(3)K) results in its targeting to the plasma membrane.,domain:The AGC-kinase C-terminal mediates interaction with THEM4.,enzyme regulation:Three specIF:ic sites, one in the kinase domain (Thr-308) and the two other ones in the C-terminal regulatory region (Ser-473 and Tyr-474), need to be phosphorylated for its full activation.,function: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, partly by playing a role in both insulin-induced phosphorylation of 4E-BP1 and in insulin-induced activation of p70 S6 kinase. Promotes glycogen synthesis by mediating the insulin-induced activation of glycogen synthase.,PTM:Phosphorylation on Thr-308, Ser-473 and Tyr-474 is required for full activity. Ser-473 phosphorylation by the Rictor-mTor complex favors Thr-308 phosphorylation by PDPK1. Ser-473 phosphorylation is enhanced by

	interaction with AGAP2 isoform 2 (PIKE-A). Ser-473 phosphorylation is enhanced in focal cortical dysplasias with Taylor-type balloon cells.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. RAC subfamily.,similarity:Contains 1 AGC-kinase C-terminal domain.,similarity:Contains 1 PH domain.,similarity:Contains 1 protein kinase domain.,subcellular location:Nucleus after activation by integrin-linked protein kinase 1 (ILK1). Nuclear translocation is enhanced by interaction with TCL1A.,subunit:Interacts with AGAP2 isoform 2 (PIKE-A) in the presence of guanine nucleotides. The C-terminus interacts with CCDC88A/GRDN and THEM4. Interacts with AKTIP. Interacts (via PH domain) with MTCP1, TCL1A AND TCL1B. Interacts with CDKN1B; the interaction phosphorylates CDKN1B promoting 14-3-3 binding and cell-cycle progression.,tissue specIF:icity:In all human cell types so far analyzed.,
Subcellular Location.	Cytoplasm. Nucleus. Cell membrane. Nucleus after activation by integrin-linked protein kinase 1 (ILK1). Nuclear translocation is enhanced by interaction with TCL1A. Phosphorylation on Tyr-176 by TNK2 results in its localization to the cell membrane where it is targeted for further phosphorylations on Thr-308 and Ser-473 leading to its activation and the activated form translocates to the nucleus. Colocalizes with WDFY2 in intracellular vesicles (PubMed:16792529).
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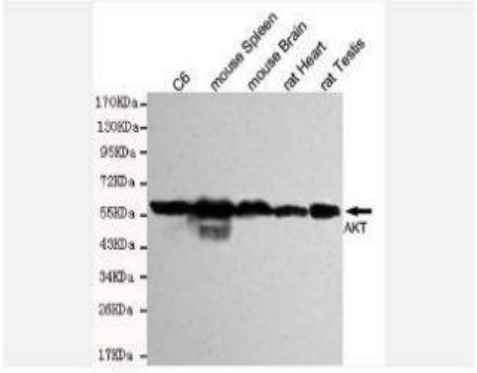
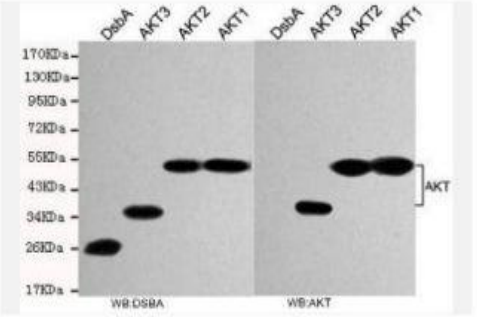
Products Images:



Western blot detection of total AKT in rat heart,rat testis,mouse brain,mouse spleen and C6 cell lysates and using AKT(pan) mouse mAb (1:1000 diluted).Predicted band size: 60KDa.Observed band size: 60KDa.



L:Western blot detection of DSBA in AKT1,AKT2,AKT3 and DSBA recombinant antigen fragments the same sample quality,and using DSBA mouse mAb (1:1000 diluted).R:Western blot detection of AKT in AKT1,AKT2 and AKT3 recombinant antigen fragments and using AKT(pan) mouse mAb (1:1000 diluted).