

Mouse Anti-Human AKT1 Monoclonal Antibody, DyLight 649

Cat. No. CAB-2492MH **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Human

Source Mouse

Antigen Description

AKT 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.

Immunogen

This monoclonal antibody was produced by repeated immunizations with a synthetic peptide corresponding to residues surrounding T308 of human AKT1 protein.

Clone Number MARL015.

Reactivity Human.

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Physical State	Lyophilized
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2.
Preservative	0.01% (w/v) Sodium Azide.
Concentration	1.0 mg/ml (by UV absorbance at 280 nm).
Application	ELISA: 1:20,000; WB: 1:500-1:3000; IHC: 20 µg/mL; OTHER: User Optimized.
Storage	Store at 4°C if entire vial will be used within 1-2 weeks. Store, frozen at -20°C-80°C for longer periods of time. Avoid multiple freeze-thaw cycles.

GENE INFORMATION

Gene Name	AKT1 v-akt murine thymoma viral oncogene homolog 1 [Homo sapiens]
Official Symbol	ATK1
Synonyms	v-akt murine thymoma viral oncogene homolog 1; AKT; PKB; RAC; PRKBA; MGC99656; PKB-ALPHA; RAC-ALPHA; AKT1; AKT1 kinase; protein kinase B; rac protein kinase alpha; RAC-alpha serine/threonine-protein kinase; C-AKT; EC 2.7.11.1; RAC-PK-alpha; Protein kinase B
Gene ID	207
mRNA Refseq	NM_001014431
Protein Refseq	NP_001014431
MIM	164730

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UniProt ID	P31749
Chromosome Location	14q32
Pathway	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; Neurotrophin signaling pathway; Non-small cell lung cancer; Pancreatic cancer; Pathways in cancer; Prostate cancer; Renal cell carcinoma; Small cell lung cancer; T cell receptor signaling pathway; Tight junction; Toll-like receptor signaling pathway; VEGF signaling pathway; mTOR signaling pathway; Regulation of beta-cell development; Apoptosis; Hemostasis; Metabolism of nitric oxide; Signaling by GPCR; Signaling in Immune system; Signalling by NGF.
Function	phosphatidylinositol-3,4,5-trisphosphate binding; phosphatidylinositol-3,4-bisphosphate binding; protein serine/threonine kinase activity; nitric-oxide synthase regulator activity; identical protein binding; transferase activity; enzyme binding; ATP binding.