

AKT(pan) 1/2/3 (Phospho Thr308) (5D10) Rabbit Monoclonal Antibody

Catalog# HZ-YMA00504

Product information

产品货号	HZ-YMA00504
别名	AKT1;AKT2;AKT3
产品名称	AKT(pan) 1/2/3 (Phospho Thr308) (5D10) Rabbit Monoclonal Antibody
类别	抗体产品
基因名称	AKT1
推荐应用	WB,IF-P,IF-F,IF-ICC,IP,ELISA
反应种属	Human,Mouse,Rat
存储缓冲液	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Human Gene ID	207;208;10000
Human Swissprot No.	P31749;P31751;Q9Y243
稀释度	WB 1:1000-1:5000, IF-P/IF-F/IF-ICC 1:200-1:1000, ELISA 1:5000-1:20000, IP 1:50-1:200
参考分子量	60kDa
预测分子量	60kDa
运输及保存条件	Biological ice bag transportation. Store at -20°C for at least 12 months(Do not lower than -25°C). Avoid freeze/thaw cycles
宿主	Rabbit
同种型	IgG,Kappa

AKT(pan) 1/2/3 (Phospho Thr308) (5D10) Rabbit Monoclonal Antibody

Catalog# HZ-YMA00504 (cont.)

Product information

背景介绍

AKT1 gene encodes one of the three members of the human AKT serine-threonine protein kinase family which are often referred to as protein kinase B alpha, beta, and gamma. These highly similar AKT proteins all have an N-terminal pleckstrin homology domain, a serine/threonine-specific kinase domain and a C-terminal regulatory domain. These proteins are phosphorylated by phosphoinositide 3-kinase (PI3K). AKT/PI3K forms a key component of many signalling pathways that involve the binding of membrane-bound ligands such as receptor tyrosine kinases, G-protein coupled receptors, and integrin-linked kinase. These AKT proteins therefore regulate a wide variety of cellular functions including cell proliferation, survival, metabolism, and angiogenesis in both normal and malignant cells. AKT proteins are recruited to the cell membrane by phosphatidylinositol 3,4,5-trisphosphate (PIP3) after phosphorylation of phosphatidylinositol 4,5-bisphosphate (PIP2) by PI3K. Subsequent phosphorylation of both threonine residue 308 and serine residue 473 is required for full activation of the AKT1 protein encoded by this gene. Phosphorylation of additional residues also occurs, for example, in response to insulin growth factor-1 and epidermal growth factor. Protein phosphatases act as negative regulators of AKT proteins by dephosphorylating AKT or PIP3. The PI3K/AKT signalling pathway is crucial for tumor cell survival. Survival factors can suppress apoptosis in a transcription-independent manner by activating AKT1 which then phosphorylates and inactivates components of the apoptotic machinery. AKT proteins also participate in the mammalian target of rapamycin (mTOR) signalling pathway which controls the assembly of the eukaryotic translation initiation factor 4F (eIF4E) complex and this pathway, in addition to responding to extracellular signals from growth factors and cytokines, is dysregulated in many cancers. Mutations in this gene are associated with multiple types of cancer and excessive tissue growth including Proteus syndrome and Cowden syndrome 6, and breast, colorectal, and ovarian cancers. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jul 2020] AKT2 gene is a putative oncogene encoding a protein belonging to a subfamily of serine/threonine kinases containing SH2-like (Src homology 2-like) domains, which is involved in signaling pathways. The gene serves as an oncogene in the tumorigenesis of cancer cells. For example, its overexpression contributes to the malignant phenotype of a subset of human ductal pancreatic cancers. The encoded protein is a general protein kinase capable of phosphorylating several known proteins, and has also been implicated in insulin signaling. [provided by RefSeq, Nov 2019] The protein encoded by AKT3 is a member of the AKT, also called PKB, serine/threonine protein kinase family. AKT kinases are known to be regulators of cell signaling in response to insulin and growth factors. They are involved in a wide variety of biological processes including cell proliferation, differentiation, apoptosis, tumorigenesis, as well as glycogen synthesis and glucose uptake. This kinase has been shown to be stimulated by platelet-derived growth factor (PDGF), insulin, and insulin-like growth factor 1 (IGF1). Alternatively spliced transcript variants encoding distinct isoforms have been described. [provided by RefSeq, Jul 2008]

细胞定位

Cytoplasm . Nucleus . Cell membrane . Nucleus after activation by integrin-linked protein kinase 1 (ILK1). Nuclear translocation is enhanced by interaction with TCLK1A. 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).

纯化

Protein A

Clonality

Monoclonal