

**产品名称:** Phospho-Akt1 (Tyr474) Rabbit Polyclonal Antibody

**产品货号:** APRab04217

### 产品概述 (Summary)

|                   |                                                                                                   |
|-------------------|---------------------------------------------------------------------------------------------------|
| 描述(Description)   | Rabbit polyclonal Antibody                                                                        |
| 宿主(Host)          | Rabbit                                                                                            |
| 应用(Application)   | WB,IHC,ICC/IF,ELISA                                                                               |
| 种属反应(Reactivity)  | Human,Mouse,Rat,Monkey                                                                            |
| 偶联物(Conjugation)  | Unconjugated                                                                                      |
| 修饰(Modification)  | Phosphorylated                                                                                    |
| 同种型(Isotype)      | IgG                                                                                               |
| 克隆(Clonality)     | Polyclonal                                                                                        |
| 剂型(Form)          | Liquid                                                                                            |
| 保存条件(Storage)     | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.          |
| 储存溶液(Buffer)      | Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N. |
| 纯化 (Purification) | Affinity purification                                                                             |

### 产品应用(Application)

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| 稀释比(Dilution Ratio)   | WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:10000 |
| 分子量(Molecular Weight) | 56kDa                                                                  |

### 抗原信息(Antigen Information)

|                       |                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 基因名(Gene Name)        | AKT1                                                                                                                                                    |
| 别名(Alternative Names) | AKT1; PKB; RAC; RAC-alpha serine/threonine-protein kinase; Protein kinase B; PKB; Protein kinase B alpha; PKB alpha; Proto-oncogene c-Akt; RAC-PK-alpha |
| 基因 ID(Gene ID)        | 207.0                                                                                                                                                   |
| SwissProt ID          | P31749                                                                                                                                                  |
| 免疫原(Immunogen)        | The antiserum was produced against synthesized peptide derived from human Akt around the phosphorylation site of Tyr474. AA range:431-480               |

### 研究背景 (Background)

The serine-threonine protein kinase encoded by the AKT1 gene is catalytically inactive in serum-starved primary and

immortalized fibroblasts. AKT1 and the related AKT2 are activated by platelet-derived growth factor. The activation is rapid and specific, and it is abrogated by mutations in the pleckstrin homology domain of AKT1. It was shown that the activation occurs through phosphatidylinositol 3-kinase. In the developing nervous system AKT is a critical mediator of growth factor-induced neuronal survival. Survival factors can suppress apoptosis in a transcription-independent manner by activating the serine/threonine kinase AKT1, which then phosphorylates and inactivates components of the apoptotic machinery. Mutations in this gene have been associated with the Proteus syndrome. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Jul 2011]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 lifetime.,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 specific 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 specificity:In all human cell types so far analyzed.,

## 研究领域 (Research Area)

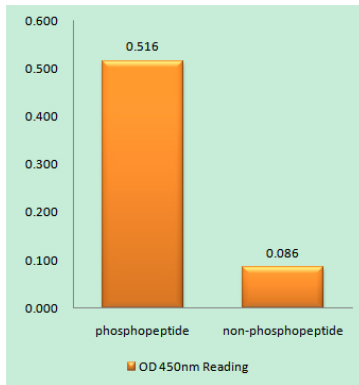
Regulation\_Microtubule; T\_Cell\_Receptor; Regulates Angiogenesis; SAPK\_JNK; Stem cell pathway; Insulin Receptor; Toll\_Like; ErbB/HER; AMPK; MAPK\_ERK\_Growth;MAPK\_G\_Protein; B\_Cell\_Antigen; Adherens\_Junction; PI3K/Akt; mTOR

## 注意事项 (Note)

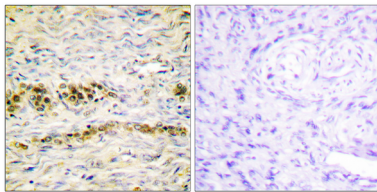
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For research use only.

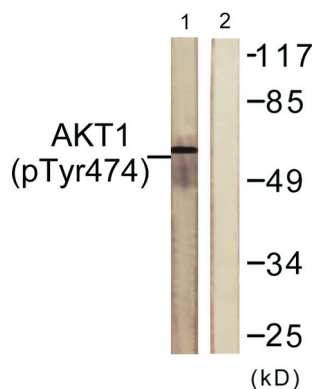
## 图片 (Image Data)



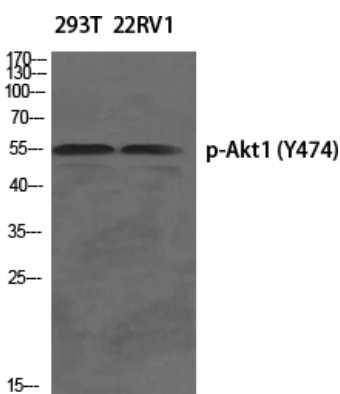
Enzyme-Linked Immunosorbent Assay ( Phospho-ELISA ) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right) , using Akt (Phospho-Tyr474) Antibody



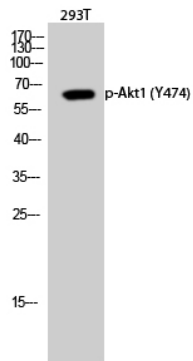
Immunohistochemistry analysis of paraffin-embedded human ovary, using Akt (Phospho-Tyr474) Antibody. The picture on the right is blocked with the phospho peptide.



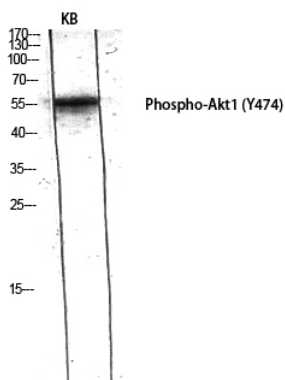
Western blot analysis of lysates from COS7 cells treated with UV 15' , using Akt (Phospho-Tyr474) Antibody. The lane on the right is blocked with the phospho peptide.



Western Blot analysis of various cells using Phospho-Akt1 (Y474) Polyclonal Antibody diluted at 1: 1000



Western Blot analysis of 293T cells using Phospho-Akt1 (Y474) Polyclonal Antibody diluted at 1: 1000



Western Blot analysis of KB cells using Phospho-Akt1 (Y474) Polyclonal Antibody diluted at 1: 1000

## EnkiLife 优势产品推荐

| 产品类别                        | 产品货号     | 产品名称                                               |
|-----------------------------|----------|----------------------------------------------------|
| WB 解决方案                     | RA10020  | 2h 极速 WB 即用型全流程试剂盒                                 |
|                             | RA10021  | 4h 快速 WB 即用型全流程试剂盒                                 |
|                             | RA10042  | 5h 畅享版 WB 全流程试剂盒                                   |
|                             | RA10037  | 校准级彩色预染蛋白 Marker (8-180kDa)                        |
|                             | RA10038  | 校准级彩色预染蛋白 Marker (10-250kDa)                       |
|                             | RA10039  | 校准级高分子彩色预染蛋白 Marker (25-400kDa)                    |
| TSA 多重荧光染色试剂盒               | RA10008  | TSA 双标三色多重荧光染色试剂盒 (mIHC)                           |
|                             | RA10009  | TSA 三标四色多重荧光染色试剂盒 (mIHC)                           |
|                             | RA10010  | TSA 四标五色多重荧光染色试剂盒 (mIHC)                           |
|                             | RA10011  | TSA 五标六色多重荧光染色试剂盒 (mIHC)                           |
|                             | RA10012  | TSA 六标七色多重荧光染色试剂盒 (mIHC)                           |
| IHC 检测试剂盒                   | RA10006  | HRP Anti-Mouse/Rabbit IHC Detection System         |
|                             | RA10007  | Polymer-HRP Anti-Mouse/Rabbit IHC Detection System |
| 抗体标记试剂盒                     | RE80004p | 辣根过氧化物酶(HRP)抗体标记试剂盒                                |
|                             | RE80002q | Sulfo-NHS-生物素标记试剂盒                                 |
|                             | RE80007p | Cy3 荧光素标记试剂盒                                       |
|                             | RE80011p | Fluor488 荧光素标记试剂盒                                  |
|                             | RE80017p | Fluor750 荧光素标记试剂盒                                  |
|                             | RE80005p | 藻红蛋白(R-PE) 抗体快速标记试剂盒                               |
|                             | RE80040  | PE-Cy7 串联染料抗体快速标记试剂盒                               |
| 稳转细胞系构建服务<br>(免费赠送全膜 WB 验证) | TS-0001  | 过表达稳转细胞系构建                                         |
|                             | TS-0002  | 敲低稳转细胞系构建                                          |
|                             | TS-0003  | 敲除细胞系构建                                            |

限于篇幅，更多产品详见官网：<https://www.enkilife.cn>