

Product datasheet for **TA323435**

AKT1 Rabbit Polyclonal Antibody

Product data:

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| Product Type: | Primary Antibodies |
| Applications: | IF, IHC, WB |
| Recommended Dilution: | WB: 1:500-1000, IHC: 1:50-100, IF: 1:100-200 |
| Reactivity: | Human, Mouse, Rat |
| Modifications: | Phospho-specific |
| Host: | Rabbit |
| Isotype: | IgG |
| Clonality: | Polyclonal |
| Immunogen: | Peptide sequence around phosphorylation site of tyrosine 315/316/312 (P-E-Y(p)-L-A) derived from Human AKT1/AKT2/AKT3. |
| Formulation: | PBS pH7.3, 0.05% NaN ₃ , 50% glycerol |
| Concentration: | lot specific |
| Purification: | Antigen affinity purification |
| Conjugation: | Unconjugated |
| Storage: | Store at -20°C as received. |
| Stability: | Stable for 12 months from date of receipt. |
| Predicted Protein Size: | 60 kDa |
| Gene Name: | AKT serine/threonine kinase 1 |
| Database Link: | NP_005154 Entrez Gene 11651 Mouse Entrez Gene 24185 Rat Entrez Gene 207 Human P31749 |



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Background:

General protein kinase capable of phosphorylating several known proteins. Phosphorylates TBC1D4. Signals downstream of phosphatidylinositol 3-kinase (PI3K) 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. /General protein kinase capable of phosphorylating several known proteins. IGF-1 leads to the activation of AKT3, which may play a role in regulating cell survival. Capable of phosphorylating several known proteins. Truncated isoform 2/PKB gamma 1 without the second serine phosphorylation site could still be stimulated but to a lesser extent.

Synonyms:

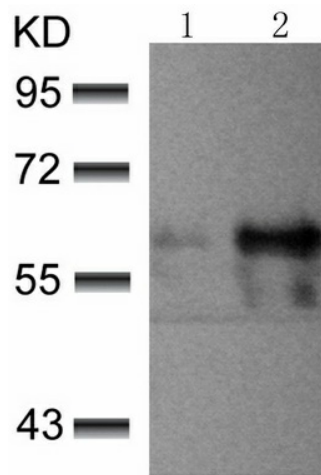
AKT; CWS6; PKB; PKB-ALPHA; PRKBA; RAC; RAC-ALPHA

Protein Families:

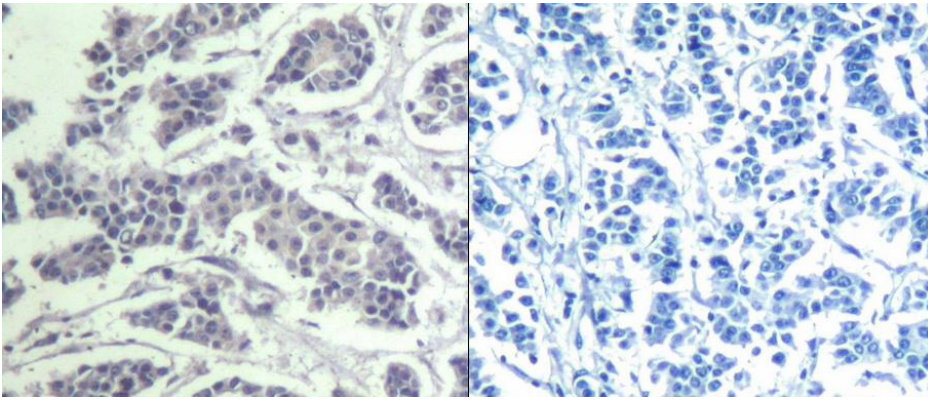
Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase

Protein Pathways:

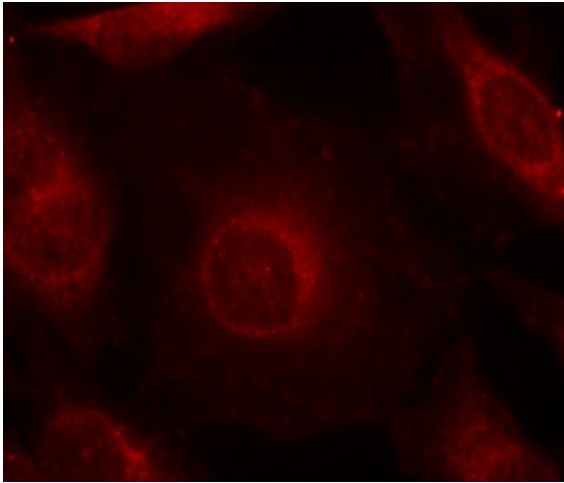
Acute myeloid leukemia, Adipocytokine signaling pathway, Apoptosis, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Glioma, Insulin signaling pathway, Jak-STAT signaling pathway, MAPK signaling pathway, Melanoma, mTOR signaling pathway, Neurotrophin signaling pathway, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Progesterone-mediated oocyte maturation, Prostate cancer, Renal cell carcinoma, Small cell lung cancer, T cell receptor signaling pathway, Tight junction, Toll-like receptor signaling pathway, VEGF signaling pathway

Product images:

Predicted band size: 60 kDa. Positive control: HepG2 cells untreated or treated with EGF lysate. Recommended dilution: 1/ 500-1000. (Gel: 10%SDS-PAGE Lane 1: HepG2 cells untreated with EGF lysate Lane 2: HepG2 cells treated with EGF lysate Lysates: 30 ug per lane Primary antibody: 1/500 dilution Secondary antibody: Goat anti Rabbit IgG - H&L (HRP) at 1/10000 dilution Exposure time: 1 minute)



Predicted cell location: Cytoplasm; Nucleus; Cell membrane. Positive control: Human breast carcinoma tissue. Recommended dilution: 1/ 50-100 The image on the left is immunohistochemistry of paraffin-embedded human breast carcinoma tissue using AKT1/AKT2/AKT3 (phospho-Tyr315/316/312) antibody at dilution 1/50, on the right is treated with the synthetic peptide. (Original magnification: x200)



Predicted cell location: Cytoplasm; Nucleus; Cell membrane. Positive control: HeLa cells. Recommended dilution: 1/ 100-200. The image is immunofluorescence of methanol-fixed HeLa cells using AKT1/AKT2/AKT3 (phospho-Tyr315/316/312) antibody at dilution 1/100. (Original magnification: x200)