

35-1301: Polyclonal Antibody to AKT1/AKT2/AKT3 (phospho-Tyr315/316/312)

Clonality :	Polyclonal
Application :	WB,IHC,IF
Reactivity :	Human,Mouse,Rat
Gene :	AKT1
Gene ID :	207
Uniprot ID :	P31749 /P31751 Q
Format :	Purified
Alternative Name :	RAC-PK-alpha, Protein kinase B
Isotype :	Rabbit IgG
Immunogen Information :	Peptide sequence around phosphorylation site of tyrosine 315/316/312 (P-E-Y(p)-L-A) derived from Human AKT1/AKT2/AKT3.

Description

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. Nelms K, et al. (1999) Annu Rev Immunol. 17:701-738. Malabarba M G, et al. (1996) Biochem. J. 319:865-872. Hou J, et al. (1994) Science. 265:1701-1706. Quelle F W, et al. (1995) Mol Cell Biol. 15: 3336-3343.

Product Info

Amount :	50 µl / 100 µl
Content :	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage condition :	Store the antibody at 4°C, stable for 6 months. For long-term storage, store at -20°C. Avoid repeated freeze and thaw cycles.

Application Note

Predicted MW: 60kd, Western blotting: 1:500~1:1000, Immunohistochemistry: 1:50~1:100, Immunofluorescence: 1:100~1:200

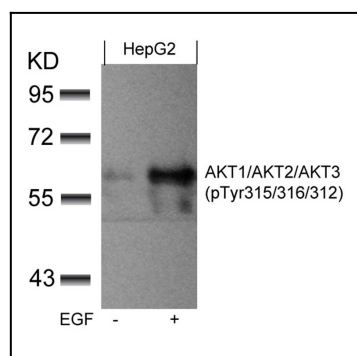


Figure 1: Western blot analysis of extracts from HepG2 cells untreated or treated with EGF using AKT1/AKT2/AKT3(phospho-Tyr315/316/312) Antibody 35-1301 .

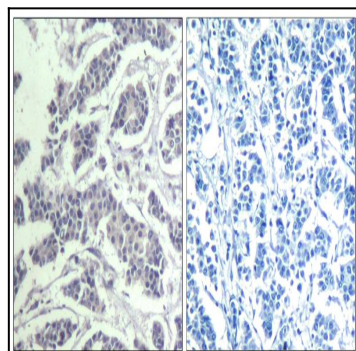


Figure 2: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using AKT1/AKT2/AKT3(Phospho-Tyr315/316/312) Antibody 35-1301 (left) or the same antibody preincubated with blocking peptide(right).

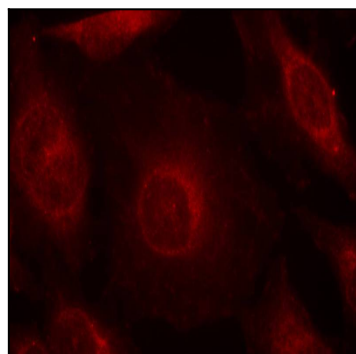


Figure 3: Immunofluorescence staining of methanol-fixed HeLa cells using AKT1/AKT2/AKT3(phospho-Tyr315/316/312) Antibody 35-1301 .

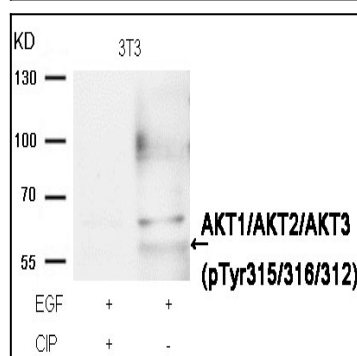


Figure 4: Western blot analysis of extracts from 3T3 cells, treated with EGF or calf intestinal phosphatase (CIP), using AKT1/AKT2/AKT3 (phospho-Tyr315/316/312) Antibody 35-1301 .