DATASHEET
Version: 2016-08-17

Akt Antibody (Phospho-Ser^{473}), pAb, Rabbit

Cat. No.: A00965-40

Size: 40 μg

Synonyms: Rabbit Anti-Akt (Phospho-Ser^{473}) pAb;

Description:

Akt, also known as protein kinase B (PKB), a serine/ threonine kinase, is a critical enzyme in several signal transduction pathways involved in cell proliferation, apoptosis, angiogenesis, and diabetes. Akt is activated following its phosphorylation at two regulatory residues. Phosphorylation of threonine on the kinase domain, catalyzed by PDK1, is essential for Akt activation. Akt activity is augmented approximately ten fold by phosphorylation at the serine on the hydrophobic motif by PDK2. Phosphorylation of Thr^{308} and Ser^{473} activates Akt α. Phosphorylation at Thr^{309} and Ser^{474} on Akt β1 and β2, and on Thr^{305} on Akt γ results in their activation. Akt promotes cell survival by inhibiting apoptosis by phosphorylating and inactivating several targets, including bad, forkhead transcription factors, c-Raf and caspase-9. The activation of Akt is negatively regulated by PTEN, a PIP3-specific phosphatase, and SHIP, a SH2-domain containing inositol 5-phosphatase.

GenScript **Rabbit Anti-Akt (Phospho-Ser^{473}) Polyclonal Antibody** is developed in rabbit using a synthetic phosphopeptide corresponding to residues surrounding S473 of human, rat, and mouse Akt α, also known as Protein Kinase B alpha (PKBα), Akt1, and RACα. In addition, this phosphopeptide is identical to the sequence surrounding S474 of human, rat, and mouse Akt β (Akt2) and S472 of human and mouse Akt γ (Akt3).

Immunogen: Synthesized phosphopeptide derived from human Akt around the phosphorylation site of serine 473 (Q-F-S^{P}-Y-S)

Host: Rabbit

Antigen Synonyms: Human

Conjugation: Unconjugated

Predicated Band Size:

57 kD

Observed Band Size:

57 kD

Formulation:

0.5 mg/ml in PBS, pH 7.4, containing 30% glycerol, and 0.02% sodium azide

Ig Subclass: Rabbit IgG

Specificity: Rabbit Anti-Akt (Phospho-Ser^{473}) detects endogenous human, mouse, and rat Akt1, Akt2 and Akt3, phosphorylated at serine 473, serine 474, and serine 472, respectively.

Purification: GenScript Rabbit Anti-Akt (Phospho-Ser^{473}) Polyclonal Antibody is purified from rabbit antiserum by affinity chromatography using epitope-specific phosphopeptide and cross-adsorbed with the corresponding non-phosphopeptide.

Applications:

Working concentrations for specific applications should be determined by the investigator. The appropriate concentrations may be affected by secondary antibody affinity, antigen concentration, the sensitivity of the method of detection, temperature, the length of the incubations, and other factors. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.05-0.2 μg/ml

Western blot: 0.5-2.0 μg/ml

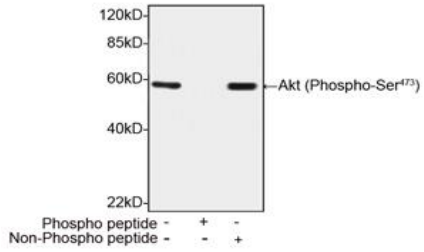
Other applications: user-optimized

Species Reactivity: Human, mouse, rat

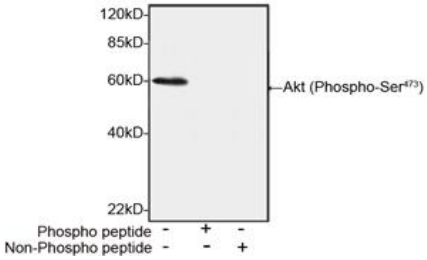
Storage:

The antibody is stable for 2-3 weeks if stored at 2-8°C. For long term storage, aliquot and store at -20°C or below. Avoid repeated freezing and thawing cycles.

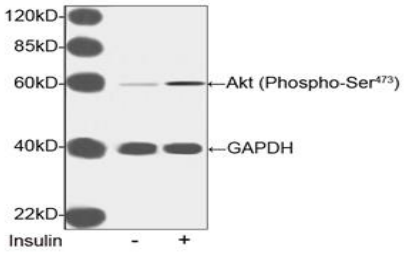
Example



Western blot analysis of extracts from HEK293 cell treated with UV using Akt Antibody (Phospho-Ser473), pAb, Rabbit (GenScript, A00965, 1 µg/ml)
The signal was developed with Goat Anti-Rabbit IgG (H&L) [HRP] Polyclonal Antibody (GenScript, A00098, 1:10,000) and LumiSensor™ HRP Substrate Kit (GenScript, L00221)
Predicted Size: 57 kD
Observed Size: 57 kD



Western blot analysis of extracts from NIH/3T3 cells stimulated with 50 ng/ml PDGF using Akt Antibody (Phospho-Ser473), pAb, Rabbit (GenScript, A00965, 1 µg/ml)
The signal was developed with Goat Anti-Rabbit IgG (H&L) [HRP] Polyclonal Antibody (GenScript, A00098, 1:10,000) LumiSensor™ HRP Substrate Kit (GenScript, L00221)
Predicted Size: 57 kD
Observed Size: 57 kD



Western blot analysis of extracts from NIH/3T3 cells stimulated with Insulin using Akt Antibody (Phospho-Ser473), pAb, Rabbit (GenScript, A00965, 1 µg/ml)
The signal was developed with Goat Anti-Rabbit IgG (H&L) [HRP] Polyclonal Antibody (GenScript, A00098, 1:10,000) and LumiSensor™ HRP Substrate Kit (GenScript, L00221)
Predicted Size: 57 kD
Observed Size: 57 kD