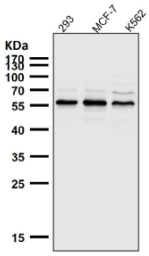
AKT1/2/3 Antibody [clone 31A24] (FY12694)

Catalog No.	Formulation	Size
FY12694	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

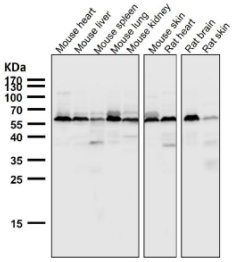
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31A24
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P31749, P31751, Q9Y243
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200 Immunocytochemistry/Immunofluorescence : 1:50-1:200 Immunoprecipitation : 1:50 Flow Cytometry : 1:50
Limitations	This AKT1/2/3 antibody is available for research use only.



All lanes use the AKT1/2/3 antibody at 1:5000 dilution for 1 hour at room temperature. Western blot analysis of AKT1/2/3 using a pan-AKT antibody. A principal band is detected at ~56 kDa with a faint higher-migrating band consistent with phosphorylated AKT and a very light lower species consistent with a less-phosphorylated or partially processed form.



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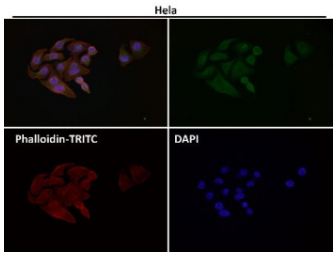
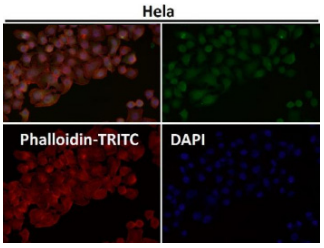
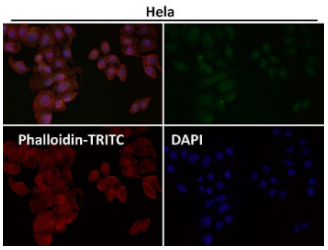


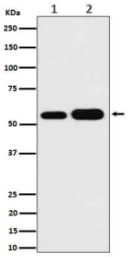
Immunofluorescent analysis using the AKT1/2/3 antibody (green) at 1:50 dilution.



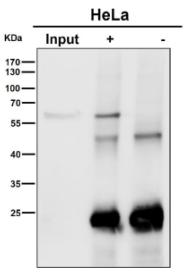
Immunofluorescent analysis using the AKT1/2/3 antibody (green) at 1:50 dilution.



Immunofluorescent analysis using the AKT1/2/3 antibody (green) at 1:150 dilution.



Western blot analysis of AKT1 + AKT2 + AKT3 expression in human (1) human Hela cell lysate and (2) human A549 cell lysate with AKT1/2/3 antibody. Predicted molecular weight ~56 kDa.



Immunoprecipitation analysis using the AKT1/2/3 antibody at 1:50 dilution. Western blot at 1:1000 dilution. Predicted molecular weight ~56 kDa.

Description

AKT1/2/3 antibody detects the three isoforms of AKT, also known as protein kinase B, encoded by the AKT1, AKT2, and AKT3 genes. These serine threonine kinases are central regulators of cell survival, growth, metabolism, and angiogenesis. AKT proteins are activated downstream of phosphoinositide 3 kinase signaling in response to growth factors and insulin. Each isoform has overlapping and unique functions, ensuring precise control of cellular physiology.

AKT1/2/3 antibody is widely applied in cancer biology, metabolism research, and neuroscience. AKT1 regulates cell survival and growth, AKT2 controls glucose metabolism, and AKT3 influences brain development and function. Dysregulation of AKT signaling is a hallmark of many cancers, diabetes, and neurological diseases. By detecting all three isoforms, researchers can evaluate global AKT activity and isoform specific contributions.

Western blot assays detect AKT isoforms in diverse tissues, immunohistochemistry maps AKT distribution in tumors and metabolic organs, and immunofluorescence reveals cytoplasmic and membrane localization upon activation. ELISA provides quantitative measurement of AKT levels in clinical and experimental samples. These applications make AKT1/2/3 antibody a versatile reagent for broad pathway analysis.

AKT kinases regulate multiple downstream targets including mTOR, FOXO transcription factors, and GSK3. They promote protein synthesis, inhibit apoptosis, and modulate metabolism. Aberrant AKT signaling drives oncogenesis, drug resistance, and metabolic disorders. By applying AKT1/2/3 antibody, scientists can investigate how PI3K AKT pathways integrate signals from growth factors, nutrients, and stress.

Therapeutically, AKT inhibitors are under development for cancer and metabolic disease. Measuring AKT expression with antibody based assays provides biomarkers for drug development and patient stratification. AKT1/2/3 antibody therefore supports translational research linking kinase biology to clinical intervention.

AKT1/2/3 antibody from NSJ Bioreagents provides dependable specificity for detecting all three isoforms of protein kinase B. Its reliable performance across multiple assays supports research into survival, metabolism, and oncogenic signaling.

Application Notes

Optimal dilution of the AKT1/2/3 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human AKT1 + AKT2 + AKT3 was used as the immunogen for the AKT1/2/3 antibody.

Storage

Store the AKT1/2/3 antibody at -20oC.