AKT Rabbit Recombinant Oligoclonal Antibody – Purified

Catalog no. 710005

(See product label for lot information)

Clone/PAD: 43HCLC
Isotype: IgG
Gene ID: 207
Protein Acc. no.: P31749
Qty: 100 µg
Volume: 200 µl
Concentration: 0.5 mg/mL

Formulation
PBS + 0.09% sodium azide

Validation
Validated for use in WB and IF

Immunogen
Recombinant protein

Sequence Identity
Human

Sequence Homology
Mouse

Expected Reactivity
Based on sequence identity and similarity, reactivity to Human and Mouse are expected.

Storage
2-8℃ for up to 1 month, -20℃ for long term storage. Avoid repeated freezing and thawing.

Expiration Date
Expires one year from date of receipt when stored as instructed.

Background
AKT also known as protein kinase B (PKB) or RAS-alpha, is an ubiquitous serine/threonine kinase that plays an important role in diverse biological responses such as regulation of metabolism, cell survival and growth by phosphorylating multiple proteins(1). This protein kinase is activated by insulin, PI3K, IGF1 and various other growth and survival factors (2). Akt promotes cell survival by inhibiting apoptosis through phosphorylation and inactivation of several targets, including forkhead transcription factors (3), and caspase-9 (4). The AKT pathway is a major target for cancer drug discovery.

References

1. Sale, E.M., and Sale, G.J. (2008). Protein kinase B: signalling roles and therapeutic targeting. Cell Mol Life Sci 65, 113-127.

2. Alessi, D.R., Andjelkovic, M., Caudwell, B., Cron, P., Morrice, N., Cohen, P., and Hemmings, B.A. (1996). Mechanism of activation of protein kinase B by insulin and IGF-1. The EMBO journal 15, 6541-6551.

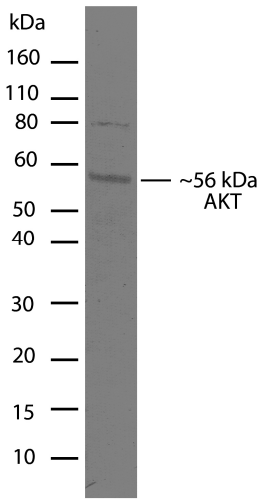
3. Brunet, A., Bonni, A., Zigmond, M.J., Lin, M.Z., Juo, P., Hu, L.S., Anderson, M.J., Arden, K.C., Blenis, J., and Greenberg, M.E. (1999). Akt promotes cell survival by phosphorylating and inhibiting a Forkhead transcription factor. Cell 96, 857-868.

4. Cardone, M.H., Roy, N., Stennicke, H.R., Salvesen, G.S., Franke, T.F., Stanbridge, E., Frisch, S., and Reed, J.C. (1998). Regulation of cell death protease caspase-9 by phosphorylation. Science (New York, NY 282, 1318-1321.

Following applications had been tested during development. To make sure the consistency and reliability in the future lots, each lot is tested with antigen ELISA for specificity and potency. Each lot is also tested with SDS-PAGE, to ensure high purity.

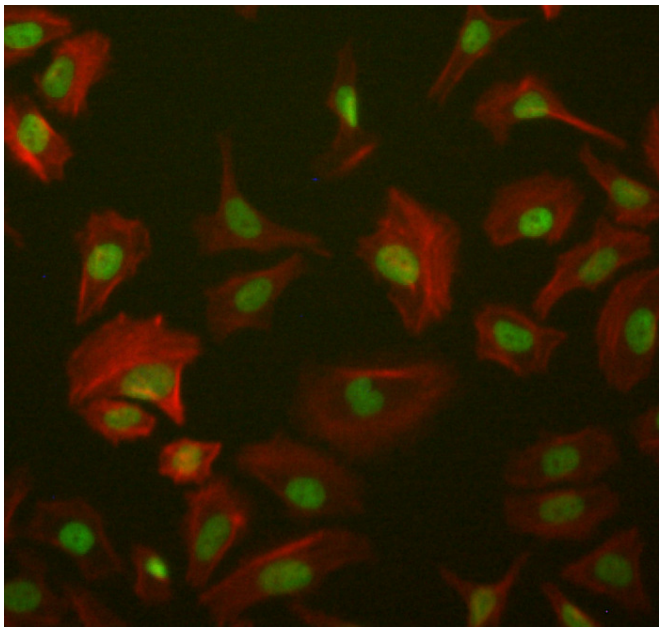
Applications:

	Species	Test Material	Concentration
Western Blotting	Human	MCF7	1-5 µg/ml
Immunofluorescence	Human	HeLa	5-10 µg/ml



Western Blot of AKT labeled with rabbit anti-AKT (Cat. No. 710005)

Rabbit anti-AKT (2.5 µg/ml) was used to label AKT in MCF7 Cell Lysate (30 µg/lane). The western was performed using the WesternBreeze® kit with NBT/BCIP as the substrate (Cat. No.WB7105).



Immunocytochemistry of HeLa cells labeled with rabbit anti-AKT (Cat. No. 710005).

HeLa cells were labeled with rabbit anti-AKT (5µg/ml). Alexa Fluor® 488 goat anti-rabbit (Cat. No. A11008) was used at 1:1000 as secondary antibody. Image shown is the composite image of AF488 signal (green) and Alexa Fluor® 594 Phalloidin (red).