

Anti-AKT2 FITC Monoclonal Antibody

Catalog Number: M00725

About AKT2

AKT is a component of the PI-3 kinase pathway and is activated by phosphorylation at Ser 473 and Thr 308. AKT is a cytoplasmic protein also known as AKT1, Protein Kinase B (PKB) and rac (related to A and C kinases). AKT is a key regulator of many signal transduction pathways. AKT Exhibits tight control over cell proliferation and cell viability. Overexpression or inappropriate activation of AKT is noted in many types of cancer. AKT mediates many of the downstream events of PI 3-kinase (a lipid kinase activated by growth factors, cytokines and insulin). PI 3-kinase recruits AKT to the membrane, where it is activated by PDK1 phosphorylation. Once phosphorylated, AKT dissociates from the membrane and phosphorylates targets in the cytoplasm and the cell nucleus. AKT has two main roles: (i) inhibition of apoptosis; (ii) promotion of proliferation. Anti-AKT2 (RAT) PE conjugated Monoclonal Antibody is ideal for investigators involved in Cell Signaling, Cancer, Neuroscience, Signal Transduction research.

Overview

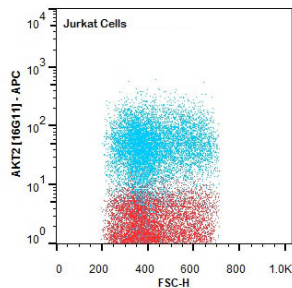
Product Name	Anti-AKT2 FITC Monoclonal Antibody
Reactive Species	Human
Description	Boster Bio Anti-AKT2 FITC Monoclonal Antibody (Catalog # M00725). Tested in applications. This antibody reacts with Human.
Conjugate	FITC
Application	Flow Cytometry, IF, IHC, WB
Clonality	Monoclonal Clone: 16G11.E8
Formulation	0.02 M Potassium Phosphate, 0.5 M Sodium Chloride, pH 7.2, 10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free, 0.01% (w/v) Sodium Azide
Storage Instructions	Store vial at 4°C prior to restoration. Restore with deionized water (or equivalent). For extended storage aliquot contents and freeze at -20°C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of restoration. Expiration date is one (1) year from date of opening.
Host	Rat
Uniprot ID	P31751

Technical Details

Immunogen	Anti-AKT2 Antibody was produced in rat by repeated immunizations with a synthetic peptide corresponding to internal residues of human AKT2 protein.
Cross Reactivity	No cross reactivity with other proteins.

Isotype	IgG2a kappa
Form	Lyophilized
Concentration	1.0 mg/mL by UV absorbance at 280 nm
Purification	Anti-AKT2 antibody is directed against human AKT2. The antibody detects both unphosphorylated and phosphorylated forms of the protein. Anti-AKT2 was purified from concentrated tissue culture supernate by Protein G chromatography. Cross-reactivity with AKT2 from other species has not been determined, however, the sequence of the immunogen shows 88% identity to mouse and 90% identity with rat, therefore, cross-reactivity is expected.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>ELISA: User Optimized</p> <p>Flow Cytometry: User Optimized</p> <p>Fluorochrome Protein Value: 1-2</p> <p>IHC: User Optimized</p> <p>IF Microscopy: User Optimized</p> <p>WB: User Optimized</p>

Anti-AKT2 FITC Monoclonal Antibody (M00725) Images



Flow Cytometry of Rat anti-AKT2 antibody. Cells: Jurkat Cells. Stimulation: none. Primary antibody: Allophycocyanin AKT2 antibody at 1.0

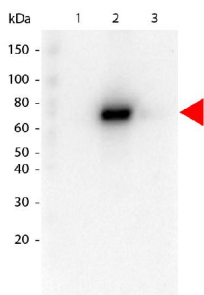


Figure 1. Western blot analysis of AKT2 using anti-AKT2 antibody (M00725).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-AKT2 antigen affinity purified polyclonal antibody (Catalog # M00725) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-rat IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1004) with Tanon 5200 system.

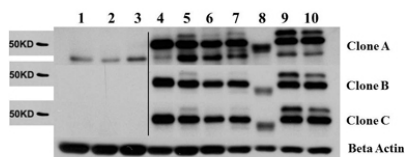


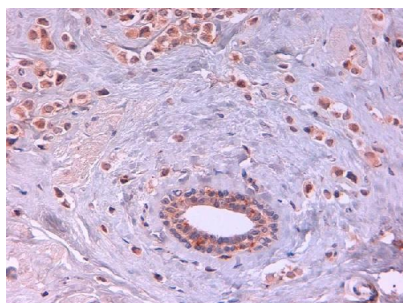
Figure 2. Western blot analysis of AKT2 using anti-AKT2 antibody (M00725).

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Figure 3. IHC analysis of AKT2 using anti-AKT2 antibody (M00725).

AKT2 was detected in paraffin-embedded section. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue



section was then incubated with 1ug/ml rabbit anti-AKT2 Antibody (M00725) overnight at 4°C. Biotinylated goat anti-rat IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1025) with DAB as the chromogen.

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