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Datasheet for 009-001-P23

AKT2 Human Recombinant Protein

Overview

Description:	AKT2 Human Recombinant Protein - 009-001-P23
Item No.:	009-001-P23
Size:	10 µg
Applications:	SDS-PAGE, WB
Origin:	Human

Product Details

Background:	AKT2 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 Protein Kinase B (PKB) and RAC (Related to A and C kinases). AKT is a key regulator of many signal transduction pathways, and it 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. AKT2 recombinant protein is ideal for investigators involved in Cell Signaling, Neuroscience and Signal Transduction research.
Synonyms:	RAC, PKB, AKT,PKB beta
Species of Origin:	Human
Type:	Recombinant Protein

Target Details

Gene Name:	AKT2
Purity/Specificity:	Recombinant protein corresponds to amino acids 1 to 479 of mature human AKT2; Akt isoform 2. The recombinant protein contains a polyhistidine affinity tag at the amino terminus. This protein was co-expressed with the p110 kinase domain leading to phosphorylation of key residues T308 and S473. Purity is greater than 90% as determined by reducing and non-reducing SDS-PAGE and by analytical HPLC.

Relevant Links:	• UniProtKB - P31751 • GeneID - 208 • NCBI - P31751

Application Details

Tested Applications:	SDS-PAGE, WB
Application Note:	Human AKT2 recombinant protein has been tested in SDS-Page and western blot and is suitable as a control for polyclonal or monoclonal anti-AKT2 in immunological assays. Akt2 recombinant protein is expected to be phosphorylated and in an active state. It is well suited as a control for anti-AKT pT308 which detects phosphorylated T308 residue, and anti-AKT pS473, that detects phosphorylated S473. For western blot use at 50 ng or less. For other assays concentration is user optimized.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
WB:	50ng

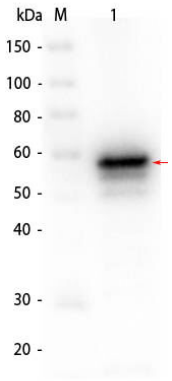
Formulation

Physical State:	Liquid
Concentration:	1.09mg/ml by UV absorbance at 280 nm
Buffer:	20 mM Tris pH8, 300 mM NaCl with 10% glycerol
Preservative:	None
Stabilizer:	10% (v/v) Glycerol

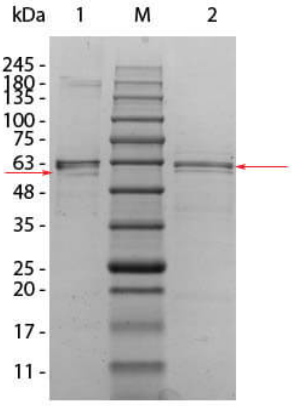
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -70° C prior to use. Thaw only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. For long term storage we recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL) . For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature.
Expiration:	Expiration date is one (1) year from date of receipt.

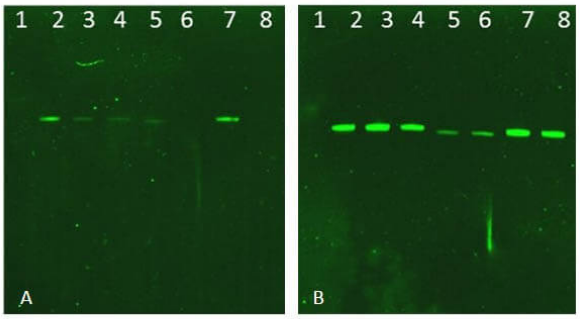
Images



Western Blot
Western Blot of AKT2 Human Recombinant Protein Lane 1: SuperSignal MW markers. Lane2: AKT2. Load: 50 ng per lane. Primary antibody: AKT2 antibody at 1:1,000 for 3.5 hours at room temperature. Secondary antibody: Peroxidase rat secondary antibody at 1:20,000 for 1 hour at room temperature. Block: Blocking Buffer for Fluorescent Western Blotting (MB-070), 1 hour at room temperature. Predicted/Observed size: 56kDa, 56kDa for AKT2. Other band(s): none.



SDS-PAGE
SDS-PAGE of AKT2 Human Recombinant Protein. Lane 1: AKT2, unreduced. Lane 2: prestained MW markers. Lane 3: AKT2, reduced. Load: 1 µg per lane. Predicted/Observed size: 56 kDa, ~56 kDa for AKT2. Other band(s): None.



Western Blot
Western Blot of Rabbit AKT Antibodies. Lane 1: NIR MW protein ladder. Lane 2: AKT1, recombinant: 009-001-P21. Lane 3: AKT1, phosphatase-treated: 009-001-I51. Lane 4: AKT1, mutant T308A/S473A: 009-001-P22. Lane 5: AKT2, recombinant: 009-001-P23. Lane 6: AKT2, phosphatase-treated: 009-001-E71. Lane 7: AKT3, recombinant: 009-001-P24. Lane 8: AKT3, phosphatase-treated: 009-001-E75. Load: 50ng per lane. Blot A: 600-401-269 Anti-Akt pT308 used at 1:2270, Blot B: 100-401-401 Anti-Akt used 1:1000.

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