

AM00109PU-N**Monoclonal Antibody to AKT2 / PKB beta (specific) (incl. pos. control) - Purified**

Alternate names:	Protein kinase Akt-2, Protein kinase B beta, RAC-PK-beta, RAC-beta serine/threonine-protein kinase
Quantity:	0.1 mg
Background:	<p>Akt, protein kinase B (PKB), is a serine/threonine kinase, which is involved in many cellular signaling pathways and acts as a transducer of many functions initiated by growth factor receptors that activate phosphatidylinositol 3-kinase (PI 3-kinase). Akt2 is amplified and overexpressed in some human cancers.</p> <p>AKT2 encodes a RAC/AKT-type protein kinase that contains a N-terminal pleckstrin-homology (PH) domain and a central catalytic domain closely related to both cAMP-dependent protein kinase and protein kinase C. The protein is a member of PI3K-mediated signalling pathways associated with the regulation of proliferation, survival, protein synthesis, and metabolism. It is activated by a variety of growth factors. AKT2 has been shown to be transcriptionally regulated by MyoD and to activate MyoD-myocyte enhancer binding factor-2 (MEF2) transactivation activity during muscle differentiation. Glycogen synthase kinase 3 (GSK-3) also has been shown to be a downstream target of AKT2. The AKT2 gene is one of the human homologues of v-akt, the transduced oncogene of the AKT8 virus, which induces lymphomas in mice. It has been implicated in breast, ovarian, and pancreatic cancers.</p>
Uniprot ID:	P31751
NCBI:	NP_001617.1
GeneID:	208
Host / Isotype:	Mouse / IgG2a
Recommended Isotype Controls:	AM03096PU-N
Clone:	8B7
Immunogen:	Synthetic peptide conjugated to KLH. Epitope: aa 107-123
Format:	State: Lyophilized purified Ig fraction Purification: Thiophilic Adsorption and Size Exclusion Chromatography. Buffer System: 1 ml, 2 x PBS containing 0.09% Sodium Azide, PEG and Sucrose Reconstitution: Restore with 1 ml H2O (15 min, RT).
Applications:	ELISA: 0.1 µg/ml. Immunohistochemistry. Western Blot: 1 µg/ml for HRPO/ECL detection. Recommended blocking buffer: Casein/Tween 20 based blocking and blot incubation buffer. <i>Included Positive Control:</i> Cell lysate from untreated HepG2 cells.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody specifically recognizes the beta isoform of PKB (PKB β /Akt2).

Species: Human.

Other species not tested.

Add. Information:

Molecular Weight: 60 kDa

Storage:

Store lyophilized (preferably in a desiccator) at -20°C and reconstituted (aliquote and freeze in liquid nitrogen) at -80°C.

Avoid repeated freezing and thawing.

Thaw aliquots at 37°C. Thawed aliquots may be stored at 4°C up to 3 months.

Shelf life: one year from despatch.

Protocols:

Positive Control Cell Lysate: HepG2 untreated.

Format: Lyophilized cell lysate from serum starved HepG2 cells.

Reconstitution: Restore by addition of 200 μ l H₂O. After complete solubilization add 200 μ l 2x SDS-PAGE sample buffer, mix and incubate at 90°C for 5 min.

Aliquote and store frozen, avoid repeated freezing and thawing.

Application: The positive control cell lysate is recommended for immunoblot applications. 20 μ l of positive control cell lysate correspond to ca. 80.000 cells. Use 20 μ l / lane (mini gel) for HRPO/ECL detection of the target proteins.

Note: The lyophilized cell lysates contain SDS and are NOT recommended for applications with native proteins such as immunoprecipitation.

Pictures:

Detection of endogenous akt2 Whole cell lysates of serum starved tumor cells (20.000 cells per lane) were applied to SDS-PAGE and transferred to PVDF membranes. Immunoblots were probed with mab PKB-8B7 (0.5 μ g/ ml) for 1h at RT and developed by ECL (exp. time: 30 sec). Lane 1: A431 Lane 2:SW480 Lane 3: SW620 Lane 4: HT29 Lane 5: MCF7 Lane 6: MDA-MB-231 Lane 7: T47D

