

Product Specification Sheet

AKT3 (RAC-PK Gamma) Antibodies

Cat. AKT31-S	Rabbit Anti-Rat/human AKT3 Antiserum # 1	SIZE: 100 ul
Cat. AKT31-P	Rat/human AKT3 Control peptide # 1	SIZE: 100 ug
Cat. AKT31-C	Human AKT3 recombinant protein, WB +ve control	SIZE: 100 ul

Putative human homologs of the protooncogene v-akt of the acutely transforming retrovirus AKT8 have been cloned. These protein-serine/threonine kinase proteins have a catalytic domain closely related to both PKA and PKC and have been designated rac (related to A and C kinases), pkb (Protein kinase B) or Akt. RAC protein kinase family members feature pleckstrin homology (PH) domain at the amino terminus and a protein-serine/threonine kinase catalytic domain at the carboxy terminus.

AKT3 or Protein Kinase gamma (RAC-PK- γ , rat 454-aa, mouse/human 479-aa) is highly related to other members of RAC protein kinase family. It is abundantly expressed in kidney, lung, and brain, but weakly in heart, testis, and liver. It is cytoplasmic and membrane associated after cell stimulation leading to its translocation. AKT3 is alternatively spliced to Gamma-1 and -2 isoform. It is phosphorylated on Thr and Ser, which are required for full activity. AKT3 is involved in regulation of cellular growth.

Human AKT3 fusion protein ~66kD (his-tag at the N-terminus) was expressed in sf21 cell and purified >50%. Human AKT31-C protein for Western blot +ve control (**Cat # AKT31-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **AKT31-C** for good visibility with antibody Cat # **AKT31-S**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **AKT31-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Do not freeze, thaw, or heat repeatedly

Sources of antigen and antibodies

Antigen	11aa peptide of Human/Rat AKT3 (1); Designated (AKT31-P or control/blocking peptide) conjugated to KLH. Epitope location ~ N-terminus
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (cat # AKT31-S)
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique).

ELISA (1:10K-1: 100K; using 50-100 ng of control peptide/well).

Histochemistry: Not tested. We recommend the use of affinity-purified antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

The rat AKT31-P control peptide sequence is 100% conserved in mouse and human. Antibody crossreactivity in various species is not known. The control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the:web site).

General References: (1) Konishi et al. (1995) BBRC **216**, 526-534; Brodbeck et al (1999) J. Biol. Chem. **274**, 9133-9136; Nakatani K et al (1999) BBRC **257**, 906-910; Marte BM and Downward J (1997) TIBS, **22**, 355-357.

**This product is for in vitro research use only.*

Related material available from ADI:

Antibodies against AKT1, AKT2, AKT3

Western Blot recycling kit (Use the same blot to probe with multiple antibodies AKT1, AKT or AKT3,) **recycle blot at room temp in 5-10 min;** No mercaptoethanol or heating required).

AKT31-S-P-C

71210S

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