ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

AKT1 (RAC-PK Alpha) (S472-phospho) Antibodies

Cat. AKT12-S	Rabbit Anti-Rat AKT1 (phosphorylated) Antiserum #2,	**SIZE**: 100 ul
Cat. AKT12-A	Rabbit Anti-Rat AKT1 (phosphorylated) IgG #2 (Aff pure)	**SIZE**: 100 ug
Cat. AKT12-P	Rat AKT1 Control phospho peptide #2	**SIZE**: 100 ug
Cat. AKT13-P	Rat AKT1 Control (non-phosphorylated) peptide #3	**SIZE**: 100 ug

Putative human homolog of the proto-oncogene 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. The Amino terminal domain (referred to as AH-Akt Homology domain) spans from 1-148 amino acids and contains the PH domain, a region found in diverse group of signaling proteins. The PH domain (amino acids 1-106) has been implicated in interactions with other proteins such as G-protein bg subunits, as well as phosphoinositides. The kinase domain is located between residues 148 to 411. These enzymes are activated by diverse ligands such as PGDF, EGF and basic FG in NIH 3T3, Rat-1 or Swiss-3T3 cells.

AKT1 (RAC-PK-a or PKB-a) is the human homolog of v-akt and is identical to RAC gene. The protein has been observed to show different migratory patterns on a western blot according to the state of phosphorylation of the protein. Phosphatase treatment has been shown to result in inactivation of the protein.

Source of Antigen and Antibodies

Polyclonal anti AKT1 (S472-phosphopeptide specific) antibodies were generated against a rat AKT1 peptide (~C-terminus, 15 aa) containing a **phosphorylated Ser472** (**designated control peptide # 2, AKT12-P**) (1). The corresponding **Non-phospho control peptide** (**designated AKT13-P, control peptide # 3**) is also available for performing peptide competition experiments. The AKT12-P peptide was coupled to KLH, and **polyclonal** antibodies generated in **rabbits**. Antibodies have been **affinity purified** over the **control-peptide** Sepharose.

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 liquid vials at -20OC and powder at 4oC or -20oC..

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

Specificity & Cross-reactivity

The rat AKT12-P phospho-peptide is 93% homologous in Mouse/ human/ chicken and bovine. The control immunogenic phopsho-peptide (AKT12-P) as well as the non-phospho peptide (AKT13-P) are available to confirm specificity of antibodies. 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 specificit.

General References: (1) Konishi et al. (1994) BBRC **205**, 817-825; Coffer & Woodgett (1991) Eur. J. Biochem. **201**, 475-481; Jones et al. (1991) PNAS USA **88**, 4171-4175; Marte BM & Downward J (1997) TIBS 22, 355;

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

Related material available from ADI:

Western Blot recycling kit (Use the same blot to probe with multiple antibodies CSP11, CLO11, etc.) **recycle blot at room temp in 5-10 min**; No mercaptoethanol or heating required).

AKT12-S-A-P-13-P 80529A

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