APC231Hu01 100μg
Active Protein Kinase B Alpha (PKBa)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Ser122~Thr443
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 6.5
Predicted Molecular Mass: 40.7kDa
Accurate Molecular Mass: 44kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

SGSPSDNSG AEEMEVSLAK PKHRVTMNEF
EYLKLLGKGT FGKVILVKEK ATGRYYAMKI LKKEVIVAKD EVAHTLTENR
VLQNSRHPFL TALKYSFQTH DRLCFVMEYA NGGELFFHLS RERVFSEDRA
RFYGAEIVSA LDYLHSEKNV VYRDLKLENL MLDKDGHIKI TDFGLCKEGI
KDGATMKTFC GTPEYLAPEV LEDNDYGRAV DWWGLGVVMY EMMCGRLPFY
NQDHEKLFEL ILMEEIRFPR TLGPEAKSLL SGLLKKDPKQ RLGGGSEDAK
EIMQHRFFAG IVWQHVYEKK LSPPFKPQVT SET

[ACTIVITY]

Protein Kinase B Alpha (PKBa), also known as AKT1, is a key member of the AKT family of serine/threonine kinases, which play a crucial role in various cellular processes including cell growth, proliferation, differentiation, and survival. PKBa is activated by insulin and growth factor signaling and phosphorylates a variety of substrates to regulate these cellular functions.The activation of akt1 requires the association with Heat Shock Protein 90kDa Alpha B1 (HSP90aB1), resulting in an active auto-regulatory cycle.Thus a functional ELISA assay was conducted to detect the interaction of recombinant human PKBa and recombinant human HSP90aB1. Briefly, PKBa was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to HSP90aB1-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-PKBa pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human PKBa

and recombinant human HSP90aB1 was shown in Figure 1, the EC50 for this effect is 0.149ug/mL.

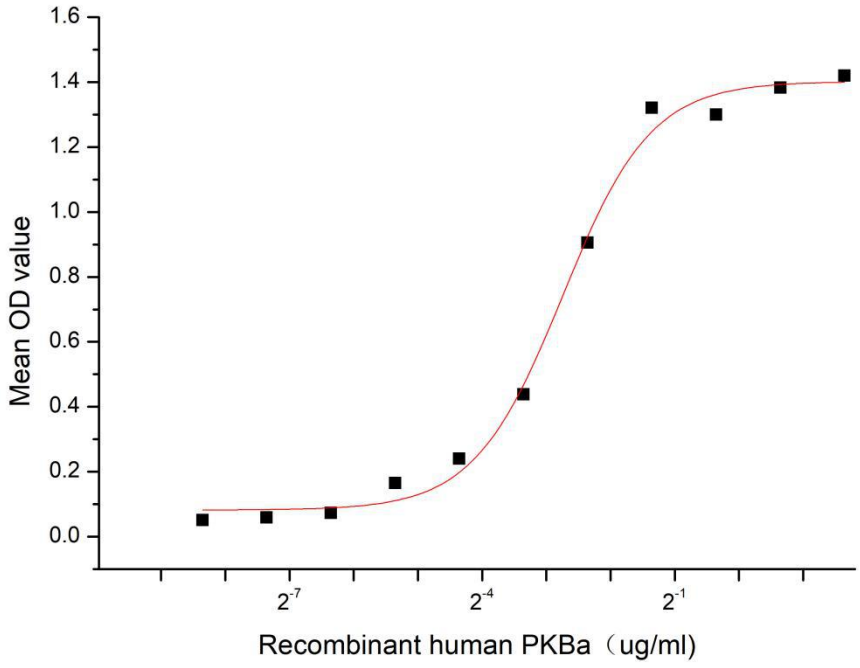

Figure 1. The binding activity of recombinant human PKBa and human HSP90aB1

[IDENTIFICATION]

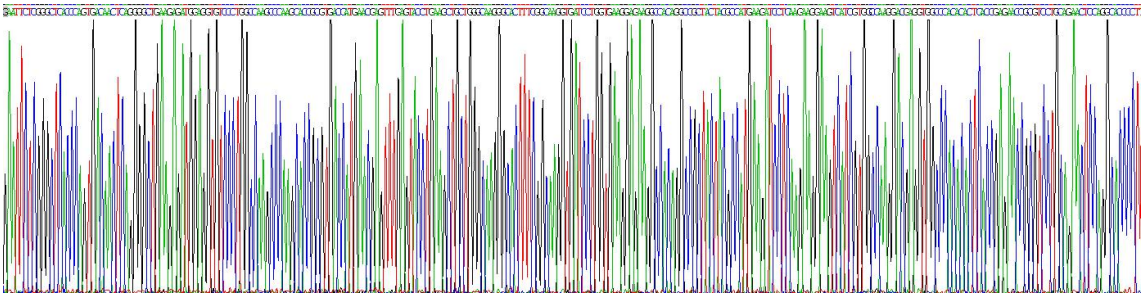

Figure 2. Gene Sequencing (extract)

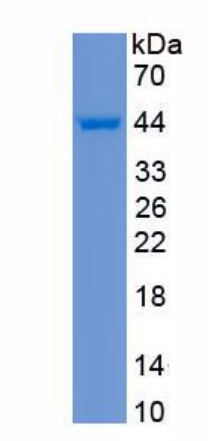

Figure 3. SDS-PAGE

Sample: Active recombinant PKBa, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.