

APH313Hu01 100µg

Active Protein Kinase, cGMP Dependent Type II (PRKG2)

Organism Species: *Homo sapiens* (Human)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Leu453~Leu728

Tags: Two N-terminal Tags, His-tag and GST-tag

Purity: >94%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 8.9

Predicted Molecular Mass: 61.8kDa

Accurate Molecular Mass: 62kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C 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 37°C 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]

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LEIIATLG VGGFGRVELV KVKNENVAFA MKCIRKKHIV DTKQQEHVYS  
EKRILEELCS PFIVKLYRTF KDNKYVYMLL EACLGGELWS ILRDRGSFDE  
PTSKFCVACV TEAFDYLHRL GIIYRDLKPE NLILDAEGYL KLVDFGFAKK  
IGSGQKTWTF CGTPEYVAPE VILNKGHDFS VDFWSLGILV YELLTGNPPF  
SGVDQMMTYN LILKGIEKMD FPRKITRPE DLIRRLCRQN PTERLGNLKN  
GINDIKKHRW LNGFNWEGLK ARSLPSPL
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[ACTIVITY]

Protein Kinase, cGMP Dependent Type II (PRKG2) belong to cGMP-dependent protein kinase or Protein Kinase G (PKG) which is a serine/threonine-specific protein kinase that is activated by cGMP. Two PKG genes, coding for PKG type I (PKG-I) and type II (PKG-II), have been identified in mammals. The PKG-I and PKG-II are homodimers of two identical subunits (~75kDa and ~85kDa, respectively) and share common structural features. PKG phosphorylates a number of biologically important targets and is implicated in the regulation of smooth muscle relaxation, platelet function, sperm metabolism, cell division, and nucleic acid synthesis. Besides, Heat Shock Protein 90kDa Alpha A1 (HSP90aA1) has been identified as an interactor of PRKG2, thus a binding ELISA assay was conducted to detect the interaction of recombinant human PRKG2 and recombinant human HSP90aA1. Briefly, PRKG2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µL were then transferred to HSP90aA1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-PRKG2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells

were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of PRKG2 and HSP90aA1 was shown in Figure 1, and this effect was in a dose dependent manner.

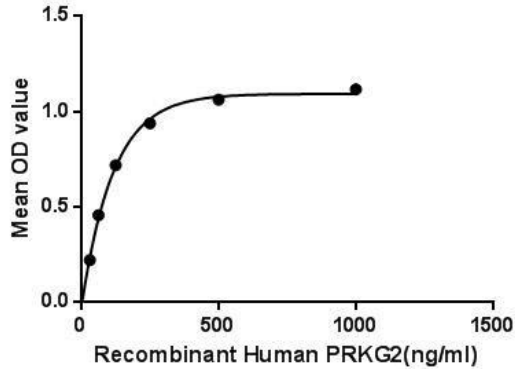


Figure 1. The binding activity of PRKG2 with HSP90aA1.

[IDENTIFICATION]

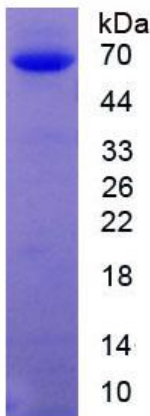


Figure 2. SDS-PAGE

Sample: Active recombinant PRKG2, Human

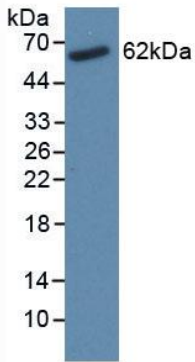


Figure 3. Western Blot

Sample: Recombinant PRKG2, Human;

Antibody: Rabbit Anti-Human PRKG2 Ab (PAH313Hu01)

[IMPORTANT NOTE]

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