

Protein Kinase, cGMP Dependent Type II Active Protein | PRKG2 active protein

Active Protein Kinase, cGMP Dependent Type II (PRKG2)

CATALOG #
AAA150142

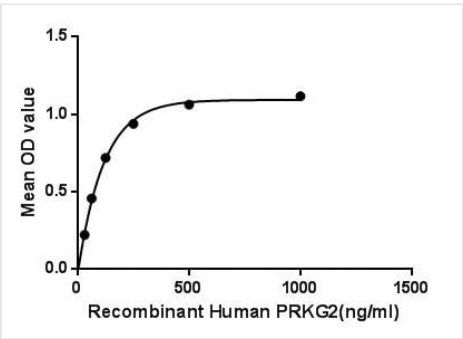
APPLICATIONS
Activity Assay, Cell Culture

PRODUCT SYNONYMS

Protein Kinase; cGMP Dependent Type II; Active Protein Kinase; cGMP Dependent Type II (PRKG2); PRKGR2; cGKII; cGMP-dependent protein kinase 2; PRKG2 active protein

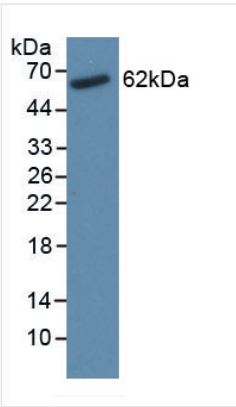
PRODUCT SPECIFICATIONS

Purity/Purification	>90%
Form/Format	Freeze-dried powder 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Sequence Positions	Leu453~Leu728
Sequence Length	762
Applicable Applications for PRKG2 active protein	Activity Assay, Cell Culture
Species	Human
Tag	N-terminal His Tag
Subcellular Location	Apical cell membrane, Lipid-anchor
Isoelectric Point	8.9
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Avoid repeated freeze/thaw cycles. Stability: 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 degree 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.

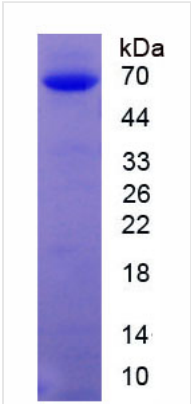


Bioactivity

Figure. The binding activity of PRKG2 with HSP90aA1. 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 100uL were then transferred to HSP90aA1-coated microtiter wells and incubated for 2h at 37. 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. Finally, add 50uL 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.



WB (Western Blot)
Figure. Western Blot



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for PRKG2 active protein	Enzyme & Kinase
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NCBI AND UNIPROT INFORMATION

NCBI GI #	5453978
NCBI GeneID	5593
NCBI Accession #	NP_006250.1
NCBI GenBank Nucleotide #	NP_006250.1

UniProt Accession #	Q13237
Molecular Weight	Predicted Molecular Mass: 61.8kDa Accurate Molecular Mass: 62kDa
NCBI Official Full Name	cGMP-dependent protein kinase 2 isoform a
NCBI Official Synonym Full Names	protein kinase cGMP-dependent 2
NCBI Official Symbol	PRKG2
NCBI Official Synonym Symbols	PKG2; cGK2; cGKII; PRKGR2
NCBI Protein Information	cGMP-dependent protein kinase 2
UniProt Protein Name	cGMP-dependent protein kinase 2
UniProt Gene Name	PRKG2
UniProt Synonym Gene Names	PRKGR2; cGK 2; cGK2; cGKII
UniProt Entry Name	KGP2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/prkg2-active-protein/protein-kinase-cgmp-dependent-type-ii/150142>