Active Protein Kinase, cGMP Dependent Type II (PRKG2)

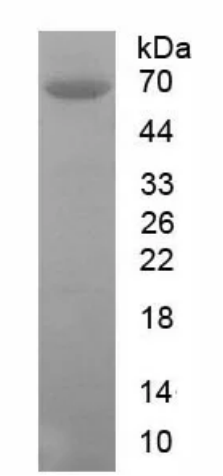
Catalog#:PEH12970

概述（Summary）

别称（Alternative Names）	PRKGR2; cGKII; cGMP-dependent protein kinase 2
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Leu453-Leu728】
Accession #	Q13237
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	61.8 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Crucial regulator of intestinal secretion and bone growth. Phosphorylates and activates CFTR on the plasma membrane. Plays a key role in intestinal secretion by regulating cGMP-dependent translocation of CFTR in jejunum. Acts downstream of NMDAR to activate the plasma membrane accumulation of GRIA1/GLUR1 in synapse and increase synaptic plasticity. Phosphorylates GRIA1/GLUR1 at Ser-863. Acts as regulator of gene expression and activator of the extracellular signal-regulated kinases MAPK3/ERK1 and MAPK1/ERK2 in mechanically stimulated osteoblasts. Under fluid shear stress, mediates ERK activation and subsequent induction of FOS, FOSL1/FRA1, FOSL2/FRA2 and FOSB

that play a key role in the osteoblast anabolic response to mechanical stimulation.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

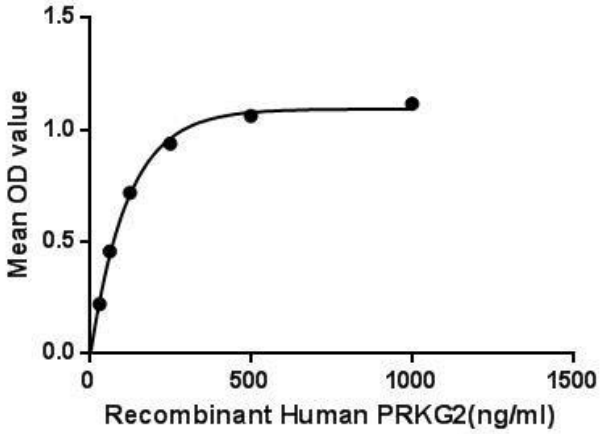


Figure. The binding activity of PRKG2 with HSP90aA1. Protein Kinase, cGMP Dependent Type II (PRKG2) belong to cGMP-dependent protein kinase or Protein Kinase G (PKG) which is a serine/threonine-specific protein kinase that is activated by cGMP. Two PKG genes, coding for PKG type I (PKG-I) and type II (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 100µL 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 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.

注意事项（Note）

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