

pki γ (D-8): sc-515108



The Power to Question

BACKGROUND

The second messenger cyclic AMP (cAMP) mediates a diverse array of cellular responses such as proliferation, ion transport, regulation of metabolism and gene transcription by activating the cAMP-dependent protein kinase (cAPK or PKA). Protein kinase inhibitors are potent inhibitors of the catalytic subunit of PKAs. Pki γ (cAMP-dependent protein kinase inhibitor γ) is a 76 amino acid protein that inhibits catalytic subunit-dependent transcription and efficiently terminates nuclear PKA activity. Knockdown of the mRNA encoding Pki γ substantially extends the anti-apoptotic effect of parathyroid hormone and β -adrenergic agonists. This evidence suggests that inhibition of PKI γ activity may be a useful co-therapy in the treatment of osteoporosis. Pki γ is highly expressed in skeletal muscle, testis and heart.

REFERENCES

- Collins, S.P. and Uhler, M.D. 1997. Characterization of PKI γ , a novel isoform of the protein kinase inhibitor of cAMP-dependent protein kinase. *J. Biol. Chem.* 272: 18169-18178.
- Zheng, L., et al. 2000. Cloning and mapping of human PKIB and PKIG, and comparison of tissue expression patterns of three members of the protein kinase inhibitor family, including PKIA. *Biochem. J.* 349: 403-407.
- Taylor, S.S., et al. 2004. PKA: a portrait of protein kinase dynamics. *Biochim. Biophys. Acta* 1697: 259-269.
- Online Mendelian Inheritance in Man, OMIMTM. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 604932. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Taylor, S.S., et al. 2005. Dynamics of signaling by PKA. *Biochim. Biophys. Acta* 1754: 25-37.

CHROMOSOMAL LOCATION

Genetic locus: PKIG (human) mapping to 20q13.12; Pkig (mouse) mapping to 2 H3.

SOURCE

pki γ (D-8) is a mouse monoclonal antibody raised against amino acids 20-76 mapping at the C-terminus of pki γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG γ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

pki γ (D-8) is available conjugated to agarose (sc-515108 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515108 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515108 PE), fluorescein (sc-515108 FITC), Alexa Fluor[®] 488 (sc-515108 AF488), Alexa Fluor[®] 546 (sc-515108 AF546), Alexa Fluor[®] 594 (sc-515108 AF594) or Alexa Fluor[®] 647 (sc-515108 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515108 AF680) or Alexa Fluor[®] 790 (sc-515108 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

pki γ (D-8) is recommended for detection of pki γ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for pki γ siRNA (h): sc-106417, pki γ siRNA (m): sc-155936, pki γ shRNA Plasmid (h): sc-106417-SH, pki γ shRNA Plasmid (m): sc-155936-SH, pki γ shRNA (h) Lentiviral Particles: sc-106417-V and pki γ shRNA (m) Lentiviral Particles: sc-155936-V.

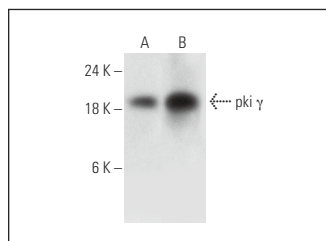
Molecular Weight of pki γ : 8 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, human testis extract: sc-363781 or Hep G2 cell lysate: sc-2227.

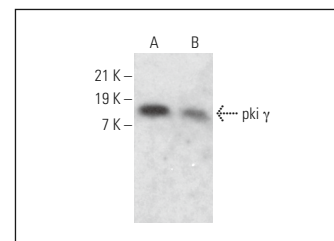
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



pki γ (D-8): sc-515108. Western blot analysis of pki γ expression in Hep G2 whole cell lysate (A) and human testis tissue extract (B).



pki γ (D-8): sc-515108. Western blot analysis of pki γ expression in c4 (A) and F9 (B) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.