SANTA CRUZ BIOTECHNOLOGY, INC.

PKA IIβ reg (H-90): sc-25424

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The second messenger cyclic AMP (cAMP) mediates diverse cellular responses to external signals such as proliferation, ion transport, regulation of metabolism and gene transcription by activation of the cAMP-dependent protein kinase (cAPK or PKA). Activation of PKA occurs when cAMP binds to the two regulatory subunits of the tetrameric PKA holoenzyme resulting in release of active catalytic subunits. Three catalytic (C) subunits have been identified, designated Cα, Cβ and Cγ, that each represent specific gene products. Cα and Cβ are closely related (93% amino acid sequence similarity), whereas Cγ displays 83% and 79% similarity to Cα and Cβ, respectively. Activation of transcription upon elevation of cAMP levels results from trans-location of PKA to the nucleus, where it phosphorylates the transcription factor cAMP response element binding protein (CREB) on Serine 133, which in turn leads to TFIIB binding to TATA-box-binding protein TBP1, thus linking phospho-CREB to the Pol II transcription initiation complex.

CHROMOSOMAL LOCATION

Genetic locus: PRKAR2B (human) mapping to 7q22.3; Prkar2b (mouse) mapping to 12 A3.

SOURCE

PKA IIβ reg (H-90) is a rabbit polyclonal antibody raised against amino acids 21-110 mapping near the N-terminus of PKA IIβ regulatory chain of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

PKA IIβ reg (H-90) is recommended for detection of PKA IIβ reg of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

PKA IIβ reg (H-90) is also recommended for detection of PKA IIβ reg in additional species, including bovine.

Suitable for use as control antibody for PKA IIβ reg siRNA (h): sc-39166, PKA IIβ reg siRNA (m): sc-39167, PKA IIβ reg shRNA Plasmid (h): sc-39166-SH, PKA IIβ reg shRNA Plasmid (m): sc-39167-SH, PKA IIβ reg shRNA (h) Lentiviral Particles: sc-39166-V and PKA IIβ reg shRNA (m) Lentiviral Particles: sc-39167-V.

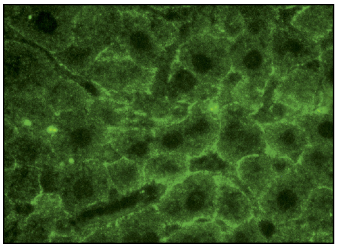
Molecular Weight of PKA IIβ reg: 53 kDa.

Positive Controls: F9 cell lysate: sc-2245, mouse liver extract: sc-2256 or rat testis extract: sc-2400.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PKA IIβ reg (H-90): sc-25424. Immunofluorescence staining of normal mouse liver frozen section showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Dyson, M.T., et al. 2008. Mitochondrial A-kinase anchoring protein 121 binds type II protein kinase A and enhances steroidogenic acute regulatory protein-mediated steroidogenesis in MA-10 mouse leydig tumor cells. Biol. Reprod. 78: 267-277.
2. Chiba, T., et al. 2011. Estrogen-dependent activation of neutral cholesterol ester hydrolase underlying gender difference of atherogenesis in apoE$^{-/-}$ mice. Atherosclerosis 219: 545-551.

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.