

# PKA II $\beta$ reg (E-20): sc-18802

## 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 C $\alpha$ , C $\beta$  and C $\gamma$ , that each represent specific gene products. C $\alpha$  and C $\beta$  are closely related (93% amino acid sequence similarity), whereas C $\gamma$  displays 83% and 79% similarity to C $\alpha$  and C $\beta$ , respectively. Activation of transcription upon elevation of cAMP levels results from translocation 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 TFIIIB 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 II $\beta$  reg (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PKA II $\beta$  reg of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18802 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

PKA II $\beta$  reg (E-20) is recommended for detection of PKA II $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 PKA II $\beta$  reg siRNA (h): sc-39166, PKA II $\beta$  reg siRNA (m): sc-39167, PKA II $\beta$  reg shRNA Plasmid (h): sc-39166-SH, PKA II $\beta$  reg shRNA Plasmid (m): sc-39167-SH, PKA II $\beta$  reg shRNA (h) Lentiviral Particles: sc-39166-V and PKA II $\beta$  reg shRNA (m) Lentiviral Particles: sc-39167-V.

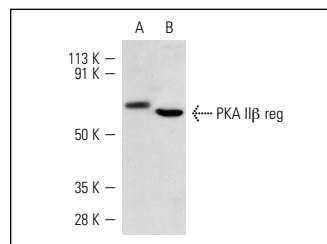
Molecular Weight of PKA II $\beta$  reg: 53 kDa.

Positive Controls: F9 cell lysate: sc-2245 or rat testis extract: sc-2400.

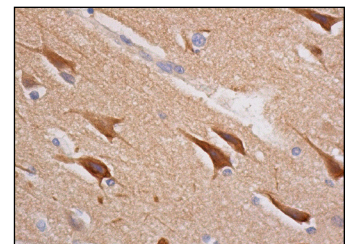
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



PKA II $\beta$  reg (E-20): sc-18802. Western blot analysis of PKA II $\beta$  reg expression in rat testis extract (A) and F9 whole cell lysate (B).



PKA II $\beta$  reg (E-20): sc-18802. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells and glial cells.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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Try **PKA II $\beta$  reg (C-2): sc-376778**, our highly recommended monoclonal alternative to PKA II $\beta$  reg (E-20).