

p-PKA II α reg (Ser 96)-R: sc-21901-R

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. 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 TFIIB binding to TATA-box-binding protein TBP1, thus linking phospho-CREB to the Pol II transcription initiation complex. Mouse Serine 96 (designated Ser 99 in human) is a putative phosphorylation site on the PKA II α regulatory subunit.

REFERENCES

1. Beavo, J.A., et al. 1974. Activation of protein kinase by physiological concentrations of cyclic AMP. Proc. Natl. Acad. Sci. USA 71: 3580-3583.
2. Krebs, E.G. and Beavo, J.A. 1980. Phosphorylation and dephosphorylation of enzymes. Annu. Rev. Biochem. 48: 923-959.

CHROMOSOMAL LOCATION

Genetic locus: PRKAR2A (human) mapping to 3p21.31; Prkar2a (mouse) mapping to 9 F2.

SOURCE

p-PKA II α reg (Ser 96)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 96 phosphorylated PKA II α reg of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-21901 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-PKA II α reg (Ser 96)-R is recommended for detection of Ser 96 phosphorylated PKA II α reg of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

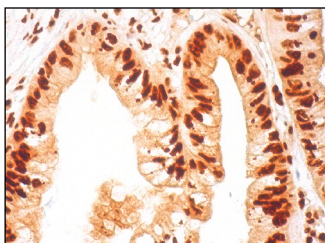
Suitable for use as control antibody for PKA II α reg siRNA (h): sc-39164, PKA II α reg siRNA (m): sc-39165, PKA II α reg shRNA Plasmid (h): sc-39164-SH, PKA II α reg shRNA Plasmid (m): sc-39165-SH, PKA II α reg shRNA (h) Lentiviral Particles: sc-39164-V and PKA II α reg shRNA (m) Lentiviral Particles: sc-39165-V.

Molecular Weight of p-PKA II α reg: 40 kDa.

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 B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-PKA II α reg (Ser 96)-R: sc-21901-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Reddy, A.B., et al. 2010. Aldose reductase inhibition prevents lipopolysaccharide-induced glucose uptake and glucose transporter 3 expression in RAW264.7 macrophages. Int. J. Biochem. Cell Biol. 42: 1039-1045.
2. Wang, D., et al. 2013. Involvement of PKA-dependent upregulation of nNOS-CGRP in adrenomedullin-initiated mechanistic pathway underlying CFA-induced response in rats. Exp. Neurol. 239: 111-119.

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.


 MONOS
Satisfaction
Guaranteed

Try **p-PKA II α reg (C-5): sc-377575**, our highly recommended monoclonal alternative to p-PKA II α reg (Ser 96).