

p-PKA II α reg (Ser 96): sc-12905

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.

CHROMOSOMAL LOCATION

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

SOURCE

p-PKA II α reg (Ser 96) is available as either goat (sc-12905) or rabbit (sc-12905-R) affinity purified polyclonal antibody raised against a short amino acid sequence containing Ser 96 phosphorylated p-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-12905 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) is recommended for detection of Ser 96 phosphorylated cAMP-dependent protein kinase type II- α regulatory subunit 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).

p-PKA II α reg (Ser 96) is also recommended for detection of correspondingly phosphorylated cAMP-dependent protein kinase type II- α regulatory subunit in additional species, including equine, canine, bovine, porcine and avian.

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.

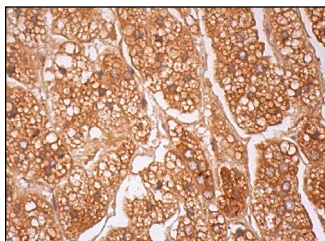
Molecular Weight of p-PKA II α reg: 40 kDa.

Positive Controls: mouse brain extract: sc-2253, NIH/3T3 whole cell lysate: sc-2210 or KNRK whole cell lysate: sc-2214.

STORAGE

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

DATA



p-PKA II α reg (Ser 96): sc-12905. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

- Nagao, S., et al. 2003. Renal activation of extracellular signal-regulated kinase in rats with autosomal-dominant polycystic kidney disease. *Kidney Int.* 63: 427-437.
- Robinet, A., et al. 2005. PI 3-kinase, protein kinase C, and protein kinase A are involved in the trigger phase of β_1 -adrenergic preconditioning. *Cardiovasc. Res.* 66: 530-542.
- Glaser, S., et al. 2006. Adrenergic receptor agonists prevent bile duct injury induced by adrenergic denervation by increased cAMP levels and activation of Akt. *Am. J. Physiol. Gastrointest. Liver Physiol.* 290: G813-G826.
- Ghadiri, A., et al. 2007. Critical function of Ikaros in controlling Aiolos gene expression. *FEBS Lett.* 581: 1605-1616.
- Francis, H., et al. 2007. H3 histamine receptor agonist inhibits biliary growth of BDL rats by downregulation of the cAMP-dependent PKA/ERK1/2/ELK-1 pathway. *Lab. Invest.* 87: 473-487.
- Wang, D., et al. 2013. Involvement of PKA-dependent upregulation of nNOS-CGPR in adrenomedullin-initiated mechanistic pathway underlying CFA-induced response in rats. *Exp. Neurol.* 239: 111-119.

RESEARCH USE

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


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