

PKA II β reg (h4): 293 Lysate: sc-129479

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 α , C β and C γ , that each represent specific gene products. C α and C β are closely related (93% amino acid sequence similarity), whereas C γ displays 83% and 79% similarity to C α and C β , 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 TFIIB binding to TATA-box-binding protein TBP1, thus linking phospho-CREB to the Pol II transcription initiation complex.

REFERENCES

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3. Maldonado, F. and Hanks, S.K. 1988. cAMP-dependent protein kinase, α -catalytic subunit. *Nucleic Acids Res.* 16: 8189-8190.
4. Gonzalez, G.A. and Montminy, M.R. 1989. Cyclic AMP stimulates somatostatin gene transcription by phosphorylation of CREB at serine 133. *Cell* 59: 675-680.
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6. Meinkoth, J.L., Alberts, A.S., Went, W., Fantozzi, D., Taylor, S.S., Hagiwara, M., Montminy, M. and Feramisco, J.R. 1993. Signal transduction through the cAMP-dependent protein kinase. *Mol. Cell. Biochem.* 127/128: 179-186.

CHROMOSOMAL LOCATION

Genetic locus: PRKAR2B (human) mapping to 7q22.3.

PRODUCT

PKA II β reg (h4): 293 Lysate represents a lysate of human PKA II β reg transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

PKA II β reg (h4): 293 Lysate is suitable as a Western Blotting positive control for human reactive PKA II β reg antibodies. Recommended use: 10-20 μ l per lane.

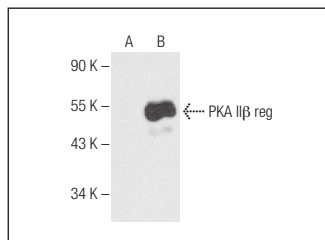
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

PKA II β reg (C-2): sc-376778 is recommended as a positive control antibody for Western Blot analysis of enhanced human PKA II β reg expression in PKA II β reg transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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 Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



PKA II β reg (C-2): sc-376778. Western blot analysis of PKA II β reg expression in non-transfected: sc-110760 (A) and human PKA II β reg transfected: sc-129479 (B) 293 whole cell lysates.

RESEARCH USE

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