

PKA α / β cat (62A C2A): sc-81174

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 TFIIIB binding to TATA-box-binding protein TBP1, thus linking phospho-CREB to the pol II transcription initiation complex.

REFERENCES

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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.
5. Beebe, S.J., Oyen, O., Sandberg, M., Froyso, A., Hansson, V. and Jahnsen, T. 1990. cAMP-dependent protein kinase, β -catalytic subunit. Mol. Endocrinol. 4: 465-475.
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SOURCE

PKA α / β cat (62A C2A) is a mouse monoclonal antibody raised against cyclic AMP kinase catalytic subunit isolated from cardiac muscle of bovine origin.

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PKA α / β cat (62A C2A) is recommended for detection of PKA α and PKA β catalytic subunits of bovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

PROTOCOLS

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



See **PKA α / β / γ cat (B-4): sc-365615** for PKA α / β / γ cat antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.