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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

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- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
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SANTA CRUZ BIOTECHNOLOGY, INC.

PKA Iβ reg (m): 293T Lysate: sc-122602

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 Cα, Cβ and Cγ, that each represent specific gene products. Cα and Cβ are closely related (93% amino acid sequence similarity), whereas Cγ displays 83% and 79% similarity to Cα and Cβ, 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

1. Beavo, J.A., Bechtel, P.J. and Krebs, E.G. 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.
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.
5. Beebe, S.J., Oyen, O., Sandberg, M., Frøysa, A., Hansson, V. and Jahnsen, T. 1990. cAMP-dependent protein kinase, β-catalytic subunit. Mol. Endocrinol. 4: 465-475.
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.
7. Nordheim, A. 1994. CREB takes CBP to tango. Nature 370: 177-178.

CHROMOSOMAL LOCATION

Genetic locus: Prkar1b (mouse) mapping to 5 G2.

PRODUCT

PKA Iβ reg (m): 293T Lysate represents a lysate of mouse PKA Iβ reg transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

PKA Iβ reg (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive PKA Iβ reg antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.

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.