



# PKA Phosphopeptide Substrate (BDI251): sc-56941

## 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 A (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 $\alpha$ , C $\beta$  and C $\gamma$ , that each represent specific gene products. C $\alpha$  and C $\beta$  are closely related (93% amino acid sequence similarity), whereas C $\gamma$  displays 83% and 79% similarity to C $\alpha$  and C $\beta$ , 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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## RESEARCH USE

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

## SOURCE

PKA Phosphopeptide Substrate (BDI251) is a mouse monoclonal antibody raised against synthetic PKA Phosphopeptide Substrate.

## PRODUCT

Each vial contains 50  $\mu$ g IgG $_1$  in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, PEG and sucrose.

## APPLICATIONS

PKA Phosphopeptide Substrate (BDI251) is recommended for detection of PKA Phosphopeptide Substrate by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

## SELECT PRODUCT CITATIONS

1. Sando, R. and Südhof, T.C. 2021. Latrophilin GPCR signaling mediates synapse formation. *Elife* 10: e65717.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.