

CREB-1 (240): sc-58

BACKGROUND

Eukaryotic gene transcription is regulated by sequence-specific transcription factors that bind modular *cis* acting promoter and enhancer elements. The ATF/CREB transcription factor family binds the palindromic cAMP response element (CRE) octanucleotide TGACGTCA. The ATF/CREB family includes CREB-1, CREB-2 (also designated ATF-4), ATF-1, ATF-2 and ATF-3. This family of proteins contains highly divergent N-terminal domains, but shares a C-terminal leucine zipper for dimerization and DNA binding. Although CREB can bind to DNA in an unphosphorylated state, it cannot activate transcription. Phosphorylation of CREB on Ser 133 by protein kinase A facilitates its interaction with the CREB-binding protein (CBP) and activates the basal transcription complex. CREB functions in neoglucogenesis through interactions with the nuclear coactivator PGC-1. CREB may play a role in the pathogenesis of type II diabetes and dilated cardiomyopathy.

CHROMOSOMAL LOCATION

Genetic locus: CREB1 (human) mapping to 2q33.3; Creb1 (mouse) mapping to 1 C2.

SOURCE

CREB-1 (240) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within the α region of CREB-1 of human origin.

PRODUCT

Each vial contains 100 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-58 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as Alexa Fluor[®] 405 (sc-58 AF405), Alexa Fluor[®] 488 (sc-58 AF488) or Alexa Fluor[®] 647 (sc-58 AF647) conjugates for flow cytometry; 100 μ g/2 ml.

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APPLICATIONS

CREB-1 (240) is recommended for detection of CREB-1A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1×10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with CREB-1B.

Suitable for use as control antibody for CREB-1 siRNA (h): sc-29281, CREB-1 siRNA (m): sc-35111, CREB-1 shRNA Plasmid (h): sc-29281-SH, CREB-1 shRNA Plasmid (m): sc-35111-SH, CREB-1 shRNA (h) Lentiviral Particles: sc-29281-V and CREB-1 shRNA (m) Lentiviral Particles: sc-35111-V.

Molecular Weight of CREB-1: 43 kDa.

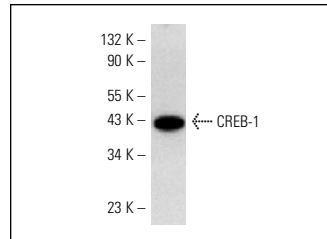
STORAGE

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

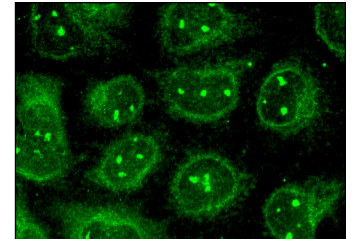
RESEARCH USE

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

DATA



CREB-1 (240): sc-58. Western blot analysis of CREB-1 expression in A-431 nuclear extract.



CREB-1 (240): sc-58. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar and cytoplasmic localization.

SELECT PRODUCT CITATIONS

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- Jang, J.Y., et al. 2011. Partially purified components of *Nardostachys chinensis* suppress melanin synthesis through ERK and Akt signaling pathway with cAMP down-regulation in B16F10 cells. *J. Ethnopharmacol.* 137: 1207-1214.
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- Liu, L., et al. 2012. Influenza A virus induces interleukin-27 through cyclooxygenase-2 and protein kinase A signaling. *J. Biol. Chem.* 287: 11899-11910.
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