

CREB-1 (H-74): sc-25785

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.

SOURCE

CREB-1 (H-74) is a rabbit polyclonal antibody raised against amino acids 254-327 of CREB-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-25785 X, 200 µg/0.1 ml.

APPLICATIONS

CREB-1 (H-74) is recommended for detection of CREB-1A, CREB-1B, CREM and ATF-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CREB-1 (H-74) is also recommended for detection of CREB-1A, CREB-1B, CREM and ATF-1 in additional species, including equine, canine, bovine, porcine and avian.

CREB-1 (H-74) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of CREB-1: 43 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, A-431 whole cell lysate: sc-2201 or A-673 cell lysate: sc-2414.

STORAGE

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

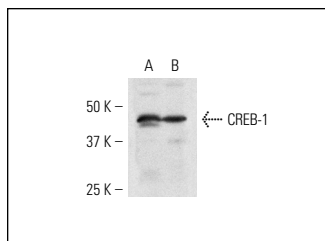
PROTOCOLS

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

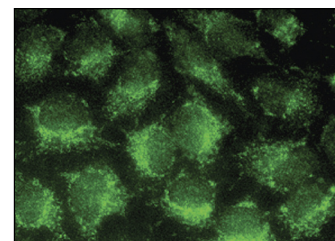
RESEARCH USE

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

DATA



CREB-1 (H-74): sc-25785. Western blot analysis of CREB-1 expression in A-431 (A) and A-673 (B) whole cell lysates.



CREB-1 (H-74): sc-25785. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

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- Makhov, P., et al. 2009. Transcriptional regulation of the major zinc uptake protein hZip1 in prostate cancer cells. *Gene* 431: 39-46.
- Li, W., et al. 2010. IL-32: a host proinflammatory factor against influenza viral replication is upregulated by aberrant epigenetic modifications during influenza A virus infection. *J. Immunol.* 185: 5056-5065.
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- Lin, M., et al. 2014. Ginsenosides Rβ1 and Rγ1 stimulate melanogenesis in human epidermal melanocytes via PKA/CREB/MITF signaling. *Evid. Based Complement. Alternat. Med.* 2014: 7.
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Try **CREB-1 (D-12): sc-377154** or **CREB-1 (D-4): sc-374227**, our highly recommended monoclonal alternatives to CREB-1 (H-74). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **CREB-1 (D-12): sc-377154**.