SANTA CRUZ BIOTECHNOLOGY, INC.

CREB-2 (H-290): sc-22800

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Eukaryotic gene transcription is regulated by sequence-specific transcription factors which bind modular *cis*-acting promoter and enhancer elements. The cAMP response element (CRE), one of the best studied of such elements, consists of the palindromic octanucleotide TGACGTCA. Several CRE binding proteins have been identified within the ATF/CREB family, the best characterized of which include CREB-1, CREB-2 (also designated ATF-4), ATF-1, ATF-2 and ATF-3. These proteins share highly related COOH terminal leucine zipper dimerization and basic DNA binding domains but are highly divergent in their amino terminal domains. Although each of the ATF/CREB proteins appear capable of binding CRE in its homodimeric form, certain of these also bind as heterodimers, both within the ATF/CREB family and even with members of the AP-1 transcription factor family.

CHROMOSOMAL LOCATION

Genetic locus: ATF4 (human) mapping to 22q13.1; Atf4 (mouse) mapping to 15 E1.

SOURCE

(H-290) is a rabbit polyclonal antibody raised against amino acids 1-290 of CREB-2 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-22800 X, 200 µg/0.1 ml.

CREB-2 (H-290) is available conjugated to agarose (sc-22800 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

APPLICATIONS

CREB-2 (H-290) is recommended for detection of CREB-2 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-2 (H-290) is also recommended for detection of CREB-2 in additional species, including canine and porcine.

Suitable for use as control antibody for CREB-2 siRNA (h): sc-35112, CREB-2 siRNA (m): sc-35113, CREB-2 shRNA Plasmid (h): sc-35112-SH, CREB-2 shRNA Plasmid (m): sc-35113-SH, CREB-2 shRNA (h) Lentiviral Particles: sc-35112-V and CREB-2 shRNA (m) Lentiviral Particles: sc-35113-V.

CREB-2 (H-290) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of CREB-2: 38 kDa.

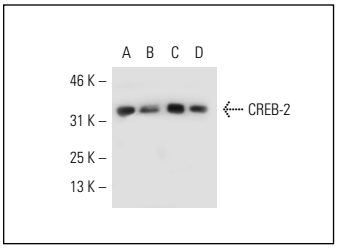
Molecular Weight (observed) of CREB-2: 40/50 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, HeLa nuclear extract: sc-2120 or A-431 nuclear extract: sc-2122.

STORAGE

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

DATA



CREB-2 (H-290): sc-22800. Western blot analysis of CREB-2 expression in HeLa nuclear extract (**A**) and A-431 (**B**), K-562 (**C**) and Jurkat (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Roybal, C.N., et al. 2005. The oxidative stressor arsenite activates vascular endothelial growth factor mRNA transcription by an ATF4-dependent mechanism. J. Biol. Chem. 280: 20331-20339.
2. Malabanan, K.P., et al. 2008. Activation transcription factor-4 induced by fibroblast growth factor-2 regulates vascular endothelial growth factor-A transcription in vascular smooth muscle cells and mediates intimal thickening in rat arteries following balloon injury. Circ. Res. 103: 378-387.
3. Hamamura, K., et al. 2009. Involvement of p38 MAPK in regulation of MMP13 mRNA in chondrocytes in response to surviving stress to endoplasmic reticulum. Arch. Oral Biol. 54: 279-286.
4. Zhang, F., et al. 2010. The African swine fever virus DP71L protein recruits the protein phosphatase 1 catalytic subunit to dephosphorylate eIF2α and inhibits CHOP induction but is dispensable for these activities during virus infection. J. Virol. 84: 10681-10689.
5. Ghosh, R., et al. 2010. Transcriptional regulation of VEGF-A by the unfolded protein response pathway. PLoS ONE 5: e9575.
6. Fischer, G., et al. 2011. Direct injection into the dorsal root ganglion: technical, behavioral, and histological observations. J. Neurosci. Methods 199: 43-55.
7. Ge, D., et al. 2013. Phosphorylation and nuclear translocation of integrin β4 induced by a chemical small molecule contribute to apoptosis in vascular endothelial cells. Apoptosis 18: 1120-1131.

RESEARCH USE

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