SANTA CRUZ BIOTECHNOLOGY, INC.

CREB-2 (C-19): sc-7583

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

CREB-2 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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-7583 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-7583 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CREB-2 (C-19) 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 (C-19) is also recommended for detection of CREB-2 in additional species, including canine, bovine 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 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

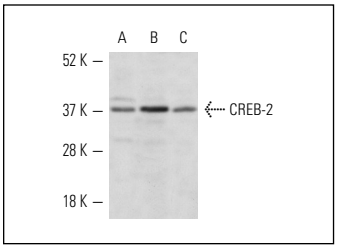
Molecular Weight (observed) of CREB-2: 40/50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 nuclear extract: sc-2122 or A-431 whole cell lysate: sc-2201.

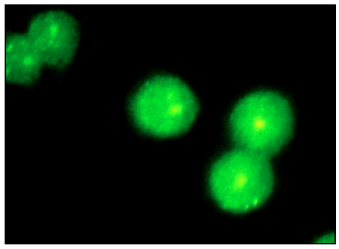
STORAGE

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

DATA



CREB-2 (C-19): sc-7583. Western blot analysis of CREB-2 expression in HeLa (**A**) and A-431 (**B**) whole cell lysates and A-431 nuclear extract (**C**).



CREB-2 (C-19): sc-7583. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. del Carmen Castellanos, M., et al. 2002. Multiple *cis*-acting elements regulate the expression of the early T cell activation antigen CD69. Eur. J. Immunol. 32: 3108-3117.
2. Xu, Q., et al. 2007. Selective progesterone receptor modulator asoprisnil induces endoplasmic reticulum stress in cultured human uterine leiomyoma cells. Am. J. Physiol. Endocrinol. Metab. 293: E1002-E1011.
3. Civelek, M., et al. 2009. Chronic endoplasmic reticulum stress activates unfolded protein response in arterial endothelium in regions of susceptibility to atherosclerosis. Circ. Res. 105: 453-461.
4. Min, L., et al. 2012. Liver cancer initiation is controlled by AP-1 through SIRT6-dependent inhibition of survivin. Nat. Cell Biol. 14: 1203-1211.
5. Cheng, Y., et al. 2013. Integrated regulation of autophagy and apoptosis by EEF2K controls cellular fate and modulates the efficacy of curcumin and velcade against tumor cells. Autophagy 9: 208-219.
6. Lenna, S., et al. 2013. HLA-B35 and dsRNA induce endothelin-1 via activation of ATF4 in human microvascular endothelial cells. PLoS ONE 8: e56123.
7. Kim, H.J., et al. 2013. Inhibition of endoplasmic reticulum stress alleviates lipopolysaccharide-induced lung inflammation through modulation of NFκB/HIF-1α signaling pathway. Sci. Rep. 3: 1142.

RESEARCH USE

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