

# CREB-2 (C-20): sc-200

## 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-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of CREB-2 of human origin.

## PRODUCT

Each vial contains 100 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-200 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-200 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CREB-2 (C-20) 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-20) 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-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

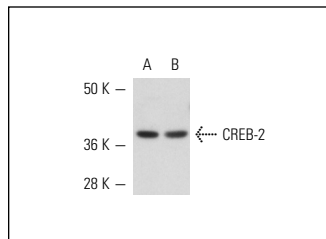
Molecular Weight (observed) of CREB-2: 40/50 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, A-431 nuclear extract: sc-2122 or HeLa whole cell lysate: sc-2200.

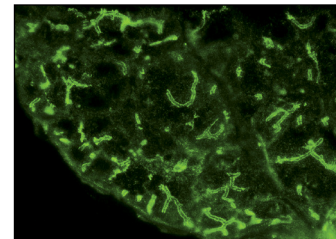
## STORAGE

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-20): sc-200. Western blot analysis of CREB-2 expression in K-562 (A) and A-431 (B) nuclear extracts.



CREB-2 (C-20): sc-200. Immunofluorescence staining of normal mouse lymph node frozen section showing membrane and cytoplasmic staining.

## SELECT PRODUCT CITATIONS

1. van der Stoep, N., et al. 2002. Transcriptional regulation of the MHC class II *trans*-activator (CIITA) promoter III: identification of a novel regulatory region in the 5'-untranslated region and an important role for cAMP-responsive element binding protein 1 and activating transcription factor-1 in CIITA-promoter III transcriptional activation in B lymphocytes. *J. Immunol.* 169: 5061-5071.
2. Qian, Z., et al. 2012. Murine cytomegalovirus targets transcription factor ATF4 to exploit the unfolded-protein response. *J. Virol.* 86: 6712-6723.
3. Zheng, X., et al. 2012. Acute hypoxia induces apoptosis of pancreatic β-cell by activation of the unfolded protein response and upregulation of CHOP. *Cell Death Dis.* 3: e322.
4. Jiménez-Castro, M.B., et al. 2012. Tauroursodeoxycholic acid affects PPARγ and TLR4 in steatotic liver transplantation. *Am. J. Transplant.* 12: 3257-3271.
5. Wei, W., et al. 2012. p300/CBP-associated factor selectively regulates the extinction of conditioned fear. *J. Neurosci.* 32: 11930-11941.
6. Alapure, B.V., et al. 2012. The unfolded protein response is activated in connexin 50 mutant mouse lenses. *Exp. Eye Res.* 102: 28-37.
7. Lind, K.R., et al. 2013. The unfolded protein response to endoplasmic reticulum stress in cultured astrocytes and rat brain during experimental diabetes. *Neurochem. Int.* 62: 784-795.

## RESEARCH USE

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

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Try **CREB-2 (B-3): sc-390063**, our highly recommended monoclonal alternative to CREB-2 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **CREB-2 (B-3): sc-390063**.