

CREM (C-12): sc-34024



The Power to Question

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 CREM, CREB-1, CREB-2 (also designated ATF-4), ATF-1, ATF-2 and ATF-3. This family of proteins contain highly divergent N-terminal domains, but share a C-terminal leucine zipper for dimerization and DNA binding. The transcription factor cAMP-responsive element modulator (CREM) is known to play a vital role for male fertility as it has been demonstrated that male mice lacking a functional CREM gene are infertile. In testis, CREM transcriptional activity is controlled through interaction with a tissue-specific partner, activator of CREM in the testis (ACT), which confers a powerful, phosphorylation-independent activation capacity. The function of ACT was found to be regulated by the testis-specific kinesin KIF17b also reactive with canine and syrian hamster.

REFERENCES

1. Montminy, M.R., et al. 1986. Identification of a cyclic-AMP-responsive element within the rat somatostatin gene. *Proc. Natl. Acad. Sci. USA* 83: 6682-6686.
2. Lin, Y.S., et al. 1988. Interaction of a common cellular transcription factor, ATF, with regulatory elements in both Ela- and cyclic AMP-inducible promoters. *Proc. Natl. Acad. Sci. USA* 85: 3396-3400.
3. Hai, T.W., et al. 1989. Transcription factor ATF cDNA clones: an extensive family of leucine zipper proteins able to selectively form DNA-binding heterodimers. *Genes Dev.* 8: 2083-2090.

CHROMOSOMAL LOCATION

Genetic locus: CREM (human) mapping to 10p11.21; Crem (mouse) mapping to 18 A1.

SOURCE

CREM (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CREM 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-34024 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-34024 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

CREM (C-12) is recommended for detection of CREM 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).

CREM (C-12) is also recommended for detection of CREM in additional species, including equine, canine, porcine and avian.

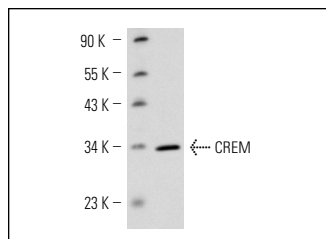
Suitable for use as control antibody for CREM siRNA (h): sc-37700, CREM siRNA (m): sc-37701, CREM shRNA Plasmid (h): sc-37700-SH, CREM shRNA Plasmid (m): sc-37701-SH, CREM shRNA (h) Lentiviral Particles: sc-37700-V and CREM shRNA (m) Lentiviral Particles: sc-37701-V.

CREM (C-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of CREM: 39 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, rat heart extract: sc-239 or KNRK nuclear extract: sc-2141.

DATA



CREM (C-12): sc-34024. Western blot analysis of CREM expression in rat heart tissue extract.

SELECT PRODUCT CITATIONS

1. Brunacci, C., et al. 2010. Identification and characterization of a novel peptide interacting with cAMP-responsive elements binding and cAMP-responsive elements modulator in mouse liver. *Liver Int.* 30: 388-395.
2. Xu, W.M., et al. 2011. Defective CFTR-dependent CREB activation results in impaired spermatogenesis and azoospermia. *PLoS ONE* 6: e19120.
3. McCarthy, M.J., et al. 2012. CREB involvement in the regulation of striatal prodynorphin by nicotine. *Psychopharmacology* 221: 143-153.

RESEARCH USE

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



Try **CREM (C-2): sc-390426** or **CREM (22): sc-101530**, our highly recommended monoclonal alternatives to CREM (C-12). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CREM (C-2): sc-390426**.