

CREM (X-12): sc-440



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.

CHROMOSOMAL LOCATION

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

SOURCE

CREM (X-12) is a rabbit polyclonal antibody raised against amino acids 1-264 representing full length polyhistidine tagged CREM fusion protein of mouse 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-440 X, 200 µg/0.1 ml.

APPLICATIONS

CREM (X-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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with other ATF/CREB proteins and other CREM isoforms.

CREM (X-12) is also recommended for detection of CREM in additional species, including porcine.

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

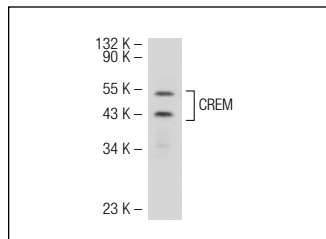
Molecular Weight of CREM: 39 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132 or KNRK nuclear extract: sc-2141.

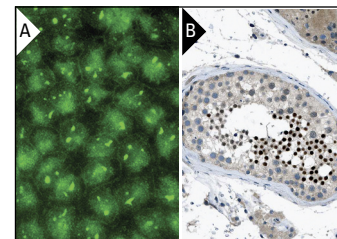
STORAGE

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

DATA



CREM (X-12): sc-440. Western blot analysis of CREM expression in Jurkat nuclear extract.



CREM (X-12): sc-440. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in ductus seminiferus. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

- Cvekl, A., et al. 1995. Transcriptional regulation of the mouse α A-crystallin gene: activation dependent on a cyclic AMP-responsive element (DE1/CRE) and a Pax-6-binding site. *Mol. Cell. Biol.* 15: 653-660.
- Reddy, A.B., et al. 2010. Aldose reductase inhibition prevents lipopolysaccharide-induced glucose uptake and glucose transporter 3 expression in RAW264.7 macrophages. *Int. J. Biochem. Cell Biol.* 42: 1039-1045.
- Pierard, V., et al. 2010. DNA cytosine methylation in the bovine leukemia virus promoter is associated with latency in a lymphoma-derived B-cell line: potential involvement of direct inhibition of cAMP-responsive element (CRE)-binding protein/CRE modulator/activation transcription factor binding. *J. Biol. Chem.* 285: 19434-19449.
- Mistry, D.S., et al. 2011. Gonadotropin-releasing hormone pulse sensitivity of follicle-stimulating hormone- β gene is mediated by differential expression of positive regulatory activator protein 1 factors and corepressors SKIL and TGIF1. *Mol. Endocrinol.* 25: 1387-1403.
- Wang, Y., et al. 2013. Low expression of cyclic AMP response element modulator-1 can increase the migration and invasion of esophageal squamous cell carcinoma. *Tumour Biol.* 34: 3649-3657.

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 (X-12). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CREM (C-2): sc-390426**.