

## CREM (Y-12): sc-34026

### 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., Sevarino, K.A., Wagner, J.A., Mandel, G. and Goodman, R.H. 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. and Green, M.R. 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., Liu, F., Coukos, W.J. and Green, M.R. 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.
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5. Blocher, S., Fink, L., Bohle, R.M., Bergmann, M. and Steger, K. 2005. CREM activator and repressor isoform expression in human male germ cells. *Int. J. Androl.* 28: 215-223.

### CHROMOSOMAL LOCATION

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

### SOURCE

CREM (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CREM 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-34026 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-34026 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

CREM (Y-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), 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 (Y-12) is also recommended for detection of CREM in additional species, including equine and 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 (Y-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.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



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