

# CREM (22): sc-101530

## 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. 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., et al. 1989. Transcription factor ATF cDNA clones: an extensive family of leucine zipper proteins able to selectively form DNA-binding heterodimers. *Genes Dev.* 3: 2083-2090.

## CHROMOSOMAL LOCATION

Genetic locus: CREM (human) mapping to 10p11.21.

## SOURCE

CREM (22) is a mouse monoclonal antibody raised against recombinant CREM of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CREM (22) is available conjugated to agarose (sc-101530 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101530 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101530 PE), fluorescein (sc-101530 FITC), Alexa Fluor<sup>®</sup> 488 (sc-101530 AF488), Alexa Fluor<sup>®</sup> 546 (sc-101530 AF546), Alexa Fluor<sup>®</sup> 594 (sc-101530 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-101530 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-101530 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-101530 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

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

## APPLICATIONS

CREM (22) is recommended for detection of CREM of 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).

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

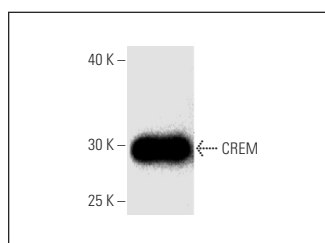
Molecular Weight of CREM: 39 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132.

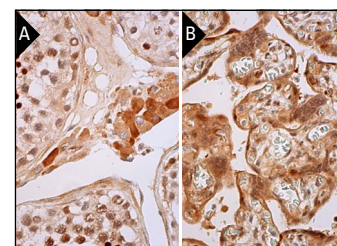
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



CREM (22): sc-101530. Western blot analysis of human recombinant CREM.



CREM (22): sc-101530. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of trophoblastic cells (B).

## SELECT PRODUCT CITATIONS

1. Oviedo, N., et al. 2018. Human CATSPER1 promoter is regulated by CREB1 and CREM transcriptional factors *in vitro*. *Arch. Med. Res.* 49: 135-146.

## RESEARCH USE

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