

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 IgG₁ 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[®] 488 (sc-101530 AF488), Alexa Fluor[®] 546 (sc-101530 AF546), Alexa Fluor[®] 594 (sc-101530 AF594) or Alexa Fluor[®] 647 (sc-101530 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-101530 AF680) or Alexa Fluor[®] 790 (sc-101530 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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), 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.

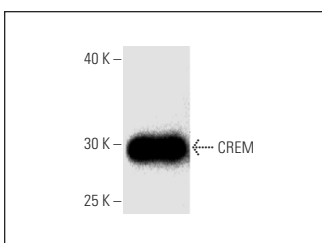
Molecular Weight of CREM: 39 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132.

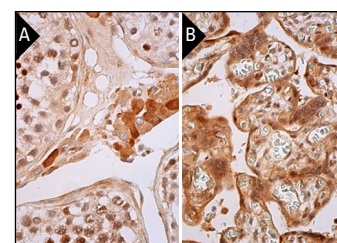
RECOMMENDED SUPPORT REAGENTS

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[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 3) 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 τ transcriptional factors *in vitro*. *Arch. Med. Res.* 49: 135-146.

RESEARCH USE

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