

CREB3L4 (D-6): sc-390850

BACKGROUND

cAMP responsive element-binding protein 3-L4 (CREB3L4), also known as AlbZIP, is a transcriptional activator that binds to DNA and is thought to be involved in the unfolded protein response. Expressed primarily in luminal epithelial cells of the prostate, as well as in breast and skeletal tissue, CREB3L4 binds as a dimer to the UPR element (UPRE) of DNA where it activates transcription. Induction of CREB3L4 is regulated by androgens, compounds found in males which, when present in high amounts, signal overexpression of CREB3L4. High levels of stress in the endoplasmic reticulum (ER) trigger the release and translocation of the N-terminal domain of CREB3L4 from the ER membrane to the nucleus, allowing the protein to access the DNA and activate transcription. Increased levels of CREB3L4 are found in prostatic cancers, suggesting a possible role in tumor formation.

REFERENCES

1. Qi, H., et al. 2002. AlbZIP, a novel bZIP gene located on chromosome 1q21.3 that is highly expressed in prostate tumors and of which the expression is up-regulated by androgens in LNCaP human prostate cancer cells. *Cancer Res.* 62: 721-733.
2. Cao, G., et al. 2002. Molecular cloning and characterization of a novel human cAMP response element-binding (CREB) gene (CREB4). *J. Hum. Genet.* 47: 373-376.
3. Stirling, J. and O'hare, P. 2005. CREB4, a transmembrane bZip transcription factor and potential new substrate for regulation and cleavage by S1P. *Mol. Biol. Cell* 17: 413-426.
4. Adham, I.M., et al. 2005. Reduction of spermatogenesis but not fertility in CREB3L4-deficient mice. *Mol. Cell. Biol.* 25: 7657-7664.

CHROMOSOMAL LOCATION

Genetic locus: CREB3L4 (human) mapping to 1q21.3.

SOURCE

CREB3L4 (D-6) is a mouse monoclonal antibody raised against amino acids 96-210 mapping within an internal region of CREB3L4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390850 X, 200 µg/0.1 ml.

CREB3L4 (D-6) is available conjugated to agarose (sc-390850 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390850 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390850 PE), fluorescein (sc-390850 FITC), Alexa Fluor[®] 488 (sc-390850 AF488), Alexa Fluor[®] 546 (sc-390850 AF546), Alexa Fluor[®] 594 (sc-390850 AF594) or Alexa Fluor[®] 647 (sc-390850 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390850 AF680) or Alexa Fluor[®] 790 (sc-390850 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

CREB3L4 (D-6) is recommended for detection of CREB3L4 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for CREB3L4 siRNA (h): sc-62158, CREB3L4 shRNA Plasmid (h): sc-62158-SH and CREB3L4 shRNA (h) Lentiviral Particles: sc-62158-V.

CREB3L4 (D-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

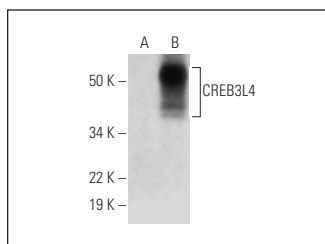
Molecular Weight of CREB3L4: 43 kDa.

Positive Controls: CREB3L4 (h): 293T Lysate: sc-115476.

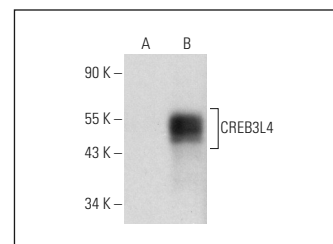
RECOMMENDED SUPPORT REAGENTS

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) 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[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



CREB3L4 (D-6): sc-390850. Western blot analysis of CREB3L4 expression in non-transfected: sc-117752 (A) and human CREB3L4 transfected: sc-115476 (B) 293T whole cell lysates.



CREB3L4 (D-6): sc-390850. Western blot analysis of CREB3L4 expression in non-transfected: sc-117752 (A) and human CREB3L4 transfected: sc-177091 (B) 293T whole cell lysates.

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 for detailed protocols and support products.