

CREST (G-8): sc-515871

BACKGROUND

The calcium-responsive transactivator (CREST, SS18L1) protein localizes to nuclear bodies and is required for the normal development of neuronal dendritic trees. CREST contains a multifunctional domain (MFD), which mediates transcription transactivation, nuclear body targeting and dimerization. CREST interacts with adenosine 3', 5'-monophosphate (cAMP) response element-binding protein (CREB)-binding protein (CBP) to regulate neuronal morphogenesis. CREST exhibits ubiquitous expression, with lowest levels observed in the spleen. Mice with a targeted disruption of the Ss18l1 (CREST) gene are viable despite defects in cortical and hippocampal dendrite development. Cortical neurons from CREST-mutant mice are compromised in calcium-dependent dendritic growth, which leads to the conclusion that calcium activation of CREST-mediated transcription helps regulate neuronal morphogenesis.

REFERENCES

1. Ishikawa, K., et al. 1998. Prediction of the coding sequences of unidentified human genes. X. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 169-176.
2. de Bruijn, D.R., et al. 2001. Mapping and characterization of the mouse and human SS18 genes, two human SS18-like genes and a mouse Ss18 pseudogene. Cytogenet. Cell Genet. 92: 310-319.
3. Storlazzi, C.T., et al. 2003. A novel fusion gene, SS18L1/SSX1, in synovial sarcoma. Genes Chromosomes Cancer 37: 195-200.
4. Aizawa, H., et al. 2004. Dendrite development regulated by CREST, a calcium-regulated transcriptional activator. Science 303: 197-202.
5. Pradhan, A. and Liu, Y. 2004. The calcium-responsive transactivator recruits CREB binding protein to nuclear bodies. Neurosci. Lett. 370: 191-195.
6. Pradhan, A. and Liu, Y. 2005. A multifunctional domain of the calcium-responsive transactivator (CREST) that inhibits dendritic growth in cultured neurons. J. Biol. Chem. 280: 24738-24743.
7. de Bruijn, D.R. and Geurts van Kessel, A. 2006. Common origin of the human synovial sarcoma associated SS18 and SS18L1 gene loci. Cytogenet. Genome Res. 112: 222-226.

CHROMOSOMAL LOCATION

Genetic locus: SS18L1 (human) mapping to 20q13.33; Ss18l1 (mouse) mapping to 2 H4.

SOURCE

CREST (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 286-314 within an internal region of CREST of mouse 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.

RESEARCH USE

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

APPLICATIONS

CREST (G-8) is recommended for detection of CREST of mouse, rat and 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 CREST siRNA (h): sc-60441, CREST siRNA (m): sc-60442, CREST shRNA Plasmid (h): sc-60441-SH, CREST shRNA Plasmid (m): sc-60442-SH, CREST shRNA (h) Lentiviral Particles: sc-60441-V and CREST shRNA (m) Lentiviral Particles: sc-60442-V.

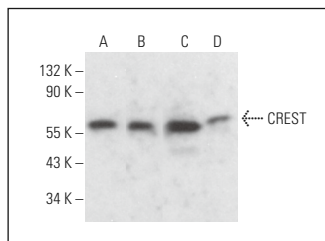
Molecular Weight of CREST: 55 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, MCF7 nuclear extract: sc-2149 or Jurkat nuclear extract: sc-2132.

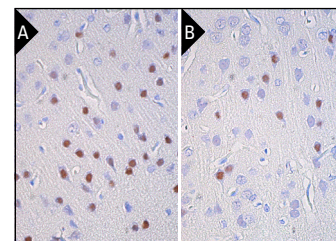
RECOMMENDED SUPPORT REAGENTS

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) 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



CREST (G-8): sc-515871. Western blot analysis of CREST expression in WEHI-231 (A), MCF7 (B) and Jurkat (C) nuclear extracts and C6 whole cell lysate (D).



CREST (G-8): sc-515871. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing cytoplasmic staining of neuronal cells (A) and rat brain tissue showing nuclear staining of a subset of neuronal cells (B). Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.