

CPEB3 (K-19): sc-55627

BACKGROUND

The regulated translation of messenger RNA is essential for cell-cycle progression, establishment of the body plan during early development and modulation of key activities in the central nervous system. Cytoplasmic polyadenylation, one mechanism of controlling translation, is driven by cytoplasmic polyadenylation element binding proteins, called CPEBs. CPEB3 (cytoplasmic polyadenylation element binding protein 3) is a 698 amino acid protein that contains 2 RNA recognition motif (RRM) domains and, like other CPEB proteins, may play a role in the maturation of the central nervous system. CPEB3 exists as multiple alternatively spliced isoforms that are encoded by a gene which maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome.

REFERENCES

1. Hake, L.E., et al. 1998. Specificity of RNA binding by CPEB: requirement for RNA recognition motifs and a novel zinc finger. *Mol. Cell. Biol.* 18: 685-693.
2. Nagase, T., et al. 1999. Prediction of the coding sequences of unidentified human genes. XIII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 6: 63-70.
3. Luitjens, C., et al. 2000. CPEB proteins control two key steps in spermatogenesis in *C. elegans*. *Genes Dev.* 14: 2596-2609.
4. Mendez, R. and Richter, J.D. 2001. Translational control by CPEB: a means to the end. *Nat. Rev. Mol. Cell Biol.* 2: 521-529.
5. Gebauer, F. and Hentze, M.W. 2001. Fertility facts: male and female germ cell development requires translational control by CPEB. *Mol. Cell* 8: 247-249.
6. Theis, M., et al. 2003. Two previously undescribed members of the mouse CPEB family of genes and their inducible expression in the principal cell layers of the hippocampus. *Proc. Natl. Acad. Sci. USA* 100: 9602-9607.

SOURCE

CPEB3 (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CPEB3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55627 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

CPEB3 (K-19) is recommended for detection of CPEB2, CPEB3 and CPEB4 of mouse and human origin and CPEB3 and CPEB4 of rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CPEB3 (K-19) is also recommended for detection of CPEB2, CPEB3 and CPEB4 in additional species, including equine, canine, bovine, porcine and avian.

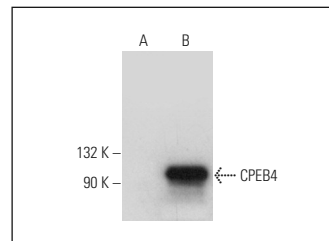
Molecular Weight of CPEB3: 76 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or CPEB3 (h): 293T Lysate: sc-173163.

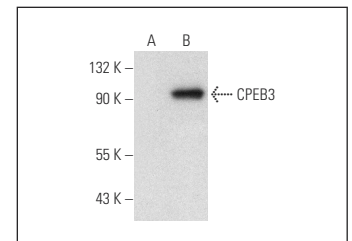
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CPEB3 (K-19): sc-55627. Western blot analysis of CPEB4 expression in non-transfected: sc-117752 (A) and human CPEB4 transfected: sc-372939 (B) 293T whole cell lysates.



CPEB3 (K-19): sc-55627. Western blot analysis of CPEB3 expression in non-transfected: sc-117752 (A) and human CPEB3 transfected: sc-173163 (B) 293T whole cell lysates.

RESEARCH USE

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