

# CPEB (C-17): sc-33889

## 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 protein, CPEB. CPEB is a highly conserved, sequence-specific RNA-binding protein that binds to the cytoplasmic polyadenylation element, thereby modulating translational repression and mRNA localization. Blocking cytoplasmic polyadenylation by interfering with the CPE or CPEB prevents the translational activation and translational repression of mRNAs crucial for oocyte maturation. CPEB is synthesized during oogenesis and stockpiled in the oocyte. CPEB degradation occurs via the proteasome pathway, most likely through ubiquitin-conjugated intermediates.

## REFERENCES

1. Stebbins-Boaz, B., et al. 1999. Maskin is a CPEB-associated factor that transiently interacts with eIF-4E. *Mol. Cell* 4: 1017-1027.
2. Luitjens, C., et al. 2000. CPEB proteins control two key steps in spermatogenesis in *C. elegans*. *Genes Dev.* 14: 2596-2609.
3. Groisman, I., et al. 2000. CPEB, maskin, and cyclin B1 mRNA at the mitotic apparatus: implications for local translational control of cell division. *Cell* 103: 435-447.
4. Reverte, C.G., et al. 2001. CPEB degradation during *Xenopus* oocyte maturation requires a PEST domain and the 26S proteasome. *Dev. Biol.* 231: 447-458.

## CHROMOSOMAL LOCATION

Genetic locus: CPEB1 (human) mapping to 15q25.2; Cpeb1 (mouse) mapping to 7 D3.

## SOURCE

CPEB (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CPEB 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-33889 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-33889 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

CPEB (C-17) is recommended for detection of CPEB long and short isoforms of mouse and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CPEB (C-17) is also recommended for detection of CPEB long and short isoforms in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CPEB siRNA (h): sc-37755, CPEB siRNA (m): sc-37756, CPEB shRNA Plasmid (h): sc-37755-SH, CPEB shRNA Plasmid (m): sc-37756-SH, CPEB shRNA (h) Lentiviral Particles: sc-37755-V and CPEB shRNA (m) Lentiviral Particles: sc-37756-V.

CPEB (C-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of CPEB: 63 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or IMR-32 cell lysate: sc-2409.

## 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) 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.

## RESEARCH USE

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



Try **CPEB (G-6): sc-514688** or **CPEB (A-9): sc-514683**, our highly recommended monoclonal alternatives to CPEB (C-17).