

# CPSF2 (A-6): sc-398539

## BACKGROUND

3' ends of eukaryotic mRNAs can undergo processing events that include endonucleolytic cleavage and polyadenylation. Cleavage and polyadenylation specificity factor (CPSF) mediates 3' cleavage of the transcript and subsequent polyadenylation. CPSF contains four subunits and localizes to the nucleoplasm where it recognizes the AAUAAA signal in pre-mRNA and interacts with other proteins to facilitate RNA cleavage and poly(A) synthesis. The human CPSF2 gene maps to chromosome 14q32.12 and encodes the second largest subunit of cleavage and polyadenylation specificity factor. U1 snRNP-A protein (U1A) interacts with and affects the activity of CPSF by stabilizing the interaction of CPSF with the AAUAAA-containing RNAs to increase the efficiency of polyadenylation.

## REFERENCES

1. Murthy, K.G. and Manley, J.L. 1995. The 160 kD subunit of human cleavage-polyadenylation specificity factor coordinates pre-mRNA 3'-end formation. *Genes Dev.* 9: 2672-2683.
2. Lutz, C.S., et al. 1996. Interaction between the U1 snRNP-A protein and the 160-kD subunit of cleavage-polyadenylation specificity factor increases polyadenylation efficiency *in vitro*. *Genes Dev.* 10: 325-337.
3. Jenny, A., et al. 1996. Sequence similarity between the 73-kilodalton protein of mammalian CPSF and a subunit of yeast polyadenylation factor I. *Science* 274: 1514-1517.
4. Barabino, S.M., et al. 1997. The 30 kD subunit of mammalian cleavage and polyadenylation specificity factor and its yeast homolog are RNA-binding zinc finger proteins. *Genes Dev.* 11: 1703-1716.
5. Salinas, C.A., et al. 1998. Characterization of a *Drosophila* homologue of the 160-kDa subunit of the cleavage and polyadenylation specificity factor CPSF. *Mol. Gen. Genet.* 257: 672-680.
6. Samiotaki, M., et al. 2000. Assignment of the 100 kDa subunit of cleavage and polyadenylation specificity factor (CPSF2) to human chromosome 14q31.3 by radiation hybrid mapping. *Cytogenet. Cell Genet.* 90: 328-329.
7. Edmonds, M. 2002. A history of poly A sequences: from formation to factors to function. *Prog. Nucleic Acid Res. Mol. Biol.* 71: 285-389.

## CHROMOSOMAL LOCATION

Genetic locus: CPSF2 (human) mapping to 14q32.12; Cpsf2 (mouse) mapping to 12 E.

## SOURCE

CPSF2 (A-6) is a mouse monoclonal antibody raised against amino acids 194-493 mapping within an internal region of CPSF2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> 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

CPSF2 (A-6) is recommended for detection of CPSF2 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 CPSF2 siRNA (h): sc-105242, CPSF2 siRNA (m): sc-142546, CPSF2 shRNA Plasmid (h): sc-105242-SH, CPSF2 shRNA Plasmid (m): sc-142546-SH, CPSF2 shRNA (h) Lentiviral Particles: sc-105242-V and CPSF2 shRNA (m) Lentiviral Particles: sc-142546-V.

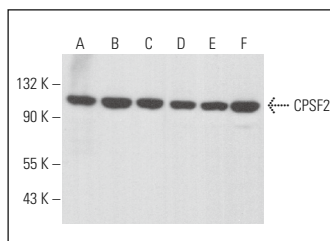
Molecular Weight of CPSF2: 103 kDa.

Positive Controls: HL-60 nuclear extract: sc-2147, Ramos nuclear extract: sc-2153 or HeLa nuclear extract: sc-2120.

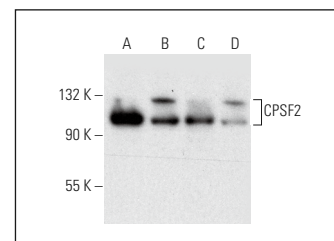
## RECOMMENDED SUPPORT REAGENTS

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



CPSF2 (A-6): sc-398539. Western blot analysis of CPSF2 expression in Ramos (A), Raji (B), NAMALWA (C), RAW 264.7 (D), WEHI-231 (E) and MM-142 (F) whole cell lysates.



CPSF2 (A-6): sc-398539. Western blot analysis of CPSF2 expression in HeLa (A), Ramos (B), HL-60 (C) and BJAB (D) nuclear extracts.

## 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) for detailed protocols and support products.