

CPSF2 (A-9): sc-398589



The Power to Question

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

- 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.
- 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.
- 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.
- 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.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

CPSF2 (A-9) 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 IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CPSF2 (A-9) is available conjugated to agarose (sc-398589 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398589 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398589 PE), fluorescein (sc-398589 FITC), Alexa Fluor® 488 (sc-398589 AF488), Alexa Fluor® 546 (sc-398589 AF546), Alexa Fluor® 594 (sc-398589 AF594) or Alexa Fluor® 647 (sc-398589 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398589 AF680) or Alexa Fluor® 790 (sc-398589 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CPSF2 (A-9) 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.

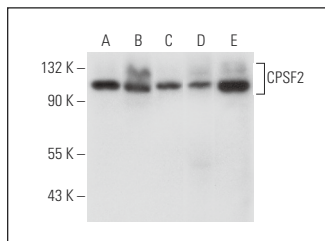
Molecular Weight of CPSF2: 103 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, NAMALWA cell lysate: sc-2234 or Raji whole cell lysate: sc-364236.

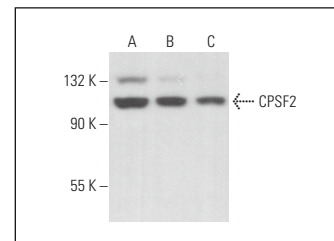
RECOMMENDED SUPPORT REAGENTS

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-9): sc-398589. Western blot analysis of CPSF2 expression in HeLa (A), Ramos (B), HL-60 (C), Jurkat (D) and BJAB (E) nuclear extracts.



CPSF2 (A-9): sc-398589. Western blot analysis of CPSF2 expression in Raji (A), NAMALWA (B) and RAW 264.7 (C) 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.

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