

CPSF4 (E-25): sc-133480

BACKGROUND

CPSF4 (cleavage and polyadenylation specificity factor subunit 4) is a nuclear protein that belongs to the CPSF4/YTH1 family and contains five C₃H₁-type zinc fingers and one CCHC-type zinc finger. CPSF4 is a component of the cleavage and polyadenylation specificity factor (CPSF) complex that plays a key role in pre-mRNA 3'-end formation. CPSF is a multi-subunit factor consisting of four subunits. CPSF recognizes the AAUAAA signal in the pre-mRNA and interacts with other proteins to facilitate both RNA cleavage and poly(A) synthesis. The largest subunit of CPSF can, by itself, bind preferentially to AAUAAA-containing RNAs and binds specifically to both the suppressor of forked subunit of the cleavage stimulatory factor (CstF) and to poly(A) polymerase. snRNP protein (U1 snRNP-A) 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. Efficient processing of 3' core poly(A) site also requires specific sequences located 76 nucleotides upstream of the AAUAAA hexamer.

REFERENCES

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- Barabino, S.M., Hubner, W., Jenny, A., Minvielle-Sebastia, L. and Keller, W. 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., Sinclair, D.A., O'Hare, K. and Brock, H.W. 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.
- de Vries, H., Rügsegger, U., Hübner, W., Friedlein, A., Langen, H. and Keller, W. 2000. Human pre-mRNA cleavage factor II_m contains homologs of yeast proteins and bridges two other cleavage factors. *EMBO J.* 19: 5895-5904.
- Kaufmann, I., Martin, G., Friedlein, A., Langen, H. and Keller, W. 2004. Human Fip1 is a subunit of CPSF that binds to U-rich RNA elements and stimulates poly(A) polymerase. *EMBO J.* 23: 616-626.

CHROMOSOMAL LOCATION

Genetic locus: CPSF4 (human) mapping to 7q22.1; Cpsf4 (mouse) mapping to 5 G2.

SOURCE

CPSF4 (E-25) is an affinity purified rabbit polyclonal antibody raised against synthetic CPSF4 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

RESEARCH USE

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

APPLICATIONS

CPSF4 (E-25) is recommended for detection of CPSF4 of mouse, rat and human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CPSF4 siRNA (h): sc-72988, CPSF4 siRNA (m): sc-72989, CPSF4 shRNA Plasmid (h): sc-72988-SH, CPSF4 shRNA Plasmid (m): sc-72989-SH, CPSF4 shRNA (h) Lentiviral Particles: sc-72988-V and CPSF4 shRNA (m) Lentiviral Particles: sc-72989-V.

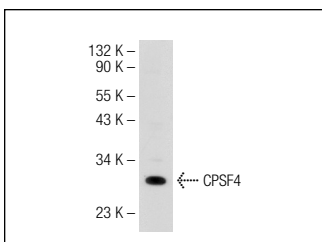
Molecular Weight of CPSF4: 30 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



CPSF4 (E-25): sc-133480. Western blot analysis of CPSF4 expression in Jurkat whole cell lysate.

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.

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Try **CPSF4 (A-11): sc-393316** or **CPSF4 (F-8): sc-514752**, our highly recommended monoclonal alternatives to CPSF4 (E-25).