

CPSF1 (N-20): sc-17289

BACKGROUND

Processing of the 3' end of mRNA depends on several protein factors. One component is the cleavage and polyadenylation specificity factor (CPSF), which is required for the cleavage of the mRNA precursor as well as polyadenylation. CPSF, a multi-subunit factor consisting of four subunits, is localized to the nucleoplasm and is excluded from cytoplasmic and nucleolar structures in HeLa cells. 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. 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. Efficient processing of 3' core poly(A) site also requires sequences 76 nucleotides upstream of the AAUAA hexamer. The largest subunit is able to interact directly with the HIV-1 upstream element to direct a stable binding of CPSF to the pre-mRNA and enhance the efficiency of polyadenylation.

CHROMOSOMAL LOCATION

Genetic locus: CPSF1 (human) mapping to 8q24.3; Cpsf1 (mouse) mapping to 15 D3.

SOURCE

CPSF1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CPSF 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-17289 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CPSF1 (N-20) is recommended for detection of CPSF1 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)], 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).

CPSF1 (N-20) is also recommended for detection of CPSF1 in additional species, including bovine.

Suitable for use as control antibody for CPSF1 siRNA (h): sc-35101, CPSF1 siRNA (m): sc-35102, CPSF1 shRNA Plasmid (h): sc-35101-SH, CPSF1 shRNA Plasmid (m): sc-35102-SH, CPSF1 shRNA (h) Lentiviral Particles: sc-35101-V and CPSF1 shRNA (m) Lentiviral Particles: sc-35102-V.

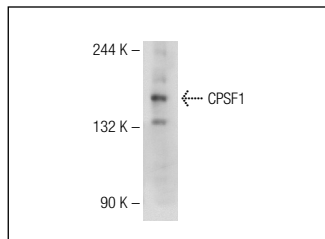
Molecular Weight of CPSF1: 160 kDa.

Positive Controls: BJAB nuclear extract: sc-2145.

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



CPSF1 (N-20): sc-17289. Western blot analysis of CPSF1 expression in BJAB nuclear extract.

SELECT PRODUCT CITATIONS

- Su, Y., et al. 2003. Convergence of RNA *cis* elements and cellular polyadenylation factors in the regulation of human cytomegalovirus UL37 exon 1 unspliced RNA production. *J. Virol.* 77: 12729-12741.
- Uhlmann, T., et al. 2007. The VP16 activation domain establishes an active mediator lacking Cdk8 *in vivo*. *J. Biol. Chem.* 282: 2163-2173.
- Mellman, D.L., et al. 2008. A PtdIns4,5P2-regulated nuclear poly(A) polymerase controls expression of select mRNAs. *Nature* 451: 1013-1017.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **CPSF1 (G-10): sc-166281** or **CPSF1 (B-5): sc-166282**, our highly recommended monoclonal alternatives to CPSF1 (N-20).